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I.—IS THERE ANY SPECIAL ACTIVITY OF  
ATTENTION ?

By F. H. BRADLEY.

THE question I have placed at the head of this article may serve to define its subject-matter. Is Attention, so far as it is *psychical* activity, an original element, and is there any specific function of attention? The strict result of the English analytical school would give a negative answer to both these questions. With that denial I agree, and I have not been able to find sufficient reason to doubt its truth. Active attention is not primary, either as being there from the first or as supervening, but is a derivative product. Nor again, I should add, is there any one special activity at all, but various activities, if they lead to one result, are called attending. This is the doctrine which the paper is written to defend, or rather to press upon the reader's notice. The whole subject is so difficult and is so implicated with other branches of psychology, that to treat of it fully is not possible here, even if in my case it were possible anywhere. My chief object is to record a kind of protest. I observe a tendency to break up the life of the soul, to divide it into active and passive factors, or to suppose a passive beginning with a supervening activity, the latter by

some identified with an irreducible act of attention. I believe this tendency to be a serious obstacle to psychology, and there is another tendency not less injurious. Attention may be given such a position that the reader cannot tell if it is primary or derivative, or, if primary, whether it is an original element or something that supervenes; or, again, whether it is one of a class of activities, or itself a class of different activities, or one function exerted on different objects. And my purpose is first to ask why we should desert the conclusion that attention is a product; and, if we must desert it, to urge that the alternative should at least be stated distinctly. The attention I am to speak of is *active* attention.

Attention (whatever it may be besides) at any rate means predominance in consciousness. Some element or elements, sensational or ideal, become prominent from the rest and seem to lower them in strength, if they do not entirely exclude them from notice. That which we attend to is said to engross us. "The expression means that a sensation tends more or less strongly to exclude from consciousness all other sensations."<sup>1</sup> Not theorising but applying descriptive metaphors, we may call attention a state which implies domination or chief tenancy of consciousness. Or we may compare it to the focusing of an optical instrument, or to the area of distinct vision in the retinal field.<sup>2</sup> Now in active attention we produce this condition (there is no doubt of that), and the question is how we are able to do this, or what is the machinery which effects the production. In order to answer this question, we must first make a general survey of the facts.

A flash of lightning by night, the report of a firearm, the sudden prick of a knife, or a violent internal pain, all these for the moment so occupy our notice that everything else becomes feeble or is banished. I shall not ask *how* it is that these intruders prevail, whether there is one cause or various ones, and, if so, how they are related.<sup>3</sup> Nor shall I enquire

<sup>1</sup> Abbreviated from J. S. Mill on James Mill's *Analysis of the Human Mind*, ii. 372.

<sup>2</sup> Hamilton, *Met.* i. 238, Lotze, *Med. Psych.* 505, and (later) Wundt, *Phys. Psych.* ii. 206. I may take this opportunity of saying that I have considered Wundt's doctrine of Apperception and am unable to adopt it, perhaps because I have failed to understand it.

<sup>3</sup> There is mere strength, pleasure and pain, and habit, including under that head inherited predispositions as well as the attractions of familiarity and change. How these stand to one another is matter of controversy which does not concern us. Stumpf, *Tonpsych.* i. 71, is inclined to doubt

if we here can be said to attend or are active in any sense. I think no one would say that we ourselves *produced* the tyranny of these assailants. Let us then go on to the states where we are certainly somehow active. When the ears are erected or the eyes opened or moved, and these reflex acts increase the power of one sensation against other mental elements, I do not know if we properly are said to attend. And, though there is a kind of "activity," yet assuredly there is here no active attention. For no psychical activity at all is present, or in any case none which produces the dominance of one mental element. Still, if the reader objects, I will not at present insist. He will agree that these reflexes are but one amongst other sorts of attention, and I will therefore pass on.

We come next to a class where the activity is still muscular, a muscular activity exerted upon a percipient organ directly, or indirectly as by turning the body. But in addition we have here a preceding idea and (according to one view) a feeling which moves. A visible object for example suggests, indirectly or directly, ideas and feelings which lead to our fixing it, and that fixation makes the perception of the object predominant and steady. There are many stages in this class, and we shall all agree that in some of them we have an active attention. There is a question in fact whether attention is much *more*, and to that question we shall be obliged to return.

We come next to a number of cases of attention where muscular activity seems not essential. But in all of these an *idea* must be present and appears to operate. A simple

the fact of attention's always strengthening, partly on the ground that in that case it would falsify observation. But, in the first place, since strength of course is relative, the observed relation might for more than one reason remain unaltered. And, in the second place, there is a most important point to be considered, to which it seems to me that Stumpf has hardly done justice. This is the distinction between the strength of a perception as a psychical state and the strength which is perceived by means of the perception. If we consider ideas, it seems hopeless to contend that the idea (*e.g.*) of a strong or weak pleasure or pain must always itself *be* a strong or weak state of mind. Such an example as the tranquil recollection of a tooth-drawing would at once confute us. And if this is so with ideas, it will, I think, be so still when we come to perceptions. The difference between the state and its ideal content will hold good there also. It will be possible to have a perception of violence which itself is not violent, and of feebleness which itself is not weak. The degree will be a character distinguishable from and contained in the whole state of perception, which latter may in some other way vary in strength while the degree remains the same. But how this can be possible is a most difficult question with which I do not feel myself at present competent to deal.

instance is the appearance in sensation or perception of an element not striking in itself but with which a dominant idea is associated. If an idea or a mass of ideas are so interesting that they are able to engross us, then the elements connected with them, whether sensible or ideal, may engross us also (cp. J. S. Mill, *loc. cit.*). Whether perceptions and ideas that attract us by their strangeness belong to this class I shall not enquire, nor for the present shall I ask what "interesting" means. What must engage us is the doubt if in this class we have everywhere *active* attention. When a thought, as we say, is much in our minds, and we dwell upon everything that suits with its presence and supports its rule, we do not know of any *act*, since all comes of itself. 'If I am active,' we should ask, 'what is it that I do?' and it is better therefore to go on to clearer instances. When I retain an idea or keep watch on an object, and still more when I investigate, I am supposed to act and also to attend, since my thoughts are confined to one main subject. But is this active attention? When for example at this moment I write about attention, I am active no doubt and I presume attending; but if you ask me whether I actively attend, I hesitate for an answer. For, if I am well and not distracted, attention seems of itself to wait upon my other activity, and, if it does not come because of it, seems to come spontaneously. It is otherwise where I have resolved to attend to some matter and still persevere. We have here the attention that proclaims itself active, and there is more than one variety. I may simply intend to occupy my mind with a certain subject, or may resolve in particular to be active upon it in such or such a manner.

Let us enumerate the results of the above survey. In the first place (1) we may have resolved to attend, or (2) to effect some mental operation which involves attention. We may also (3) perform the same act without intention or resolve, and again, where we are not conscious of action, (4) a dominant idea may lend its force to a connected element. Once more, (5) a muscular act, itself the result of idea (and perhaps feeling), may cause the predominance of sensation or idea; or (6) a sensation may be fixed by a simple reflex; or (7) lastly some element may predominate by what seems its own superior energy. The two last varieties, I think, must now be dismissed. They have of course great psychological importance, but it seems evident that they are not *active* attention.

I shall go on to attempt a clearance of the ground by dealing with the claim of muscular action; for if this contained the essence of active attention, our task would be

shortened. The "Will," it may be said, controls the voluntary muscles (and them alone), and the voluntary muscles by acting on the organs control sensation. And when we attend to an idea, and when the muscles do *not* move, yet the Will still controls. For in the idea attended to is "a muscular element," and this "mental, or revived, image occupies the same place in the brain and other parts of the system as the original sensation did" (Bain, *Emotions*, 370). Hence the Will is enabled to direct itself to the idea, and so to control it; and in this way the activity of attention is explained.

But this view will not bear an impartial scrutiny. I say nothing about the physiological hypothesis on which it seems to hang, and I will not ask whether, if the facts were as alleged, the explanation would be sufficient; for the facts are largely otherwise.<sup>1</sup> I attend to various visceral sensations, I attend to a single instrument in an orchestra, I attend to the several components of a smell, I attend to colour and not shape, and I attend in one colour, such as greenish-blue, to the blue or to the green; but it is needless to go on. There is according to the theory "a muscular intervention" in all these cases. And this cannot mean merely that in all there exists *some* "muscular element," for this (if true) would be perfectly *irrelevant*. The fact to be explained is my attending to A or B and not to C or D, and unless there are special "muscular elements" *a*, *b*, *c*, and *d*, the fact is not explained. But, if such elements are everywhere postulated, then I think I may say that, when the physiologists and the anatomists have been converted, it will be time enough for the psychologist to enquire. On the other hand, if, as I presume, Prof. Bain makes no such postulate, then I am unable to see how the theory can touch the fact to be explained.

Active attention does not consist merely in muscular innervation, and, if so, we must go on to look elsewhere. But I should like to say first that it seems to me most doubtful if attention *must* have even a muscular concomitant. I do not deny that early in development this is so, and I do not deny that, if attention reaches a certain degree of strength, there is some muscular accompaniment, such as frowning. But in my actual experience, when I pass from inattention to a direction of my thoughts, I cannot verify the *universal* presence of a muscular element; and I know no good *a priori* proof of that presence. I should add that to me this question

<sup>1</sup> Cp. Lotze, *Med. Psych.* 509.

seems to be merely one of fact, and to have no other psychological importance.<sup>1</sup>

We have now surveyed, and to some extent have cleared, our ground, and the best course will, I think, be rapidly to go through the rest of our cases, and to ask in each if we require a specific activity of attention. After this and in conclusion we will deal with some particular difficulties.

Let us first take the case where a sensation engrosses us, though not directly, and where yet we are not conscious of any activity. What operates here will be a connected idea; for the idea engrosses, and what goes with it will therefore engross us also. We, I presume, are all agreed that ideas and that groups of ideas may interest. In what interest consists is a difficult question. It is I think quite certain that it consists to a large extent in pleasure and pain, but that it always consists in nothing else, or that pleasure or pain *must* always be present, seem both to me improbable. But for the purpose of this article I shall assume that what interests does so by means of pleasure or pain. Then, if an idea is pleasing, that idea may engross us, and if an indifferent sensation suggests the idea, the idea on its side will affect the sensation and cause it to dominate (cp. J. S. Mill, *loc. cit.* 372). How it does so is again a question that opens a somewhat wide field. We must content ourselves with the answer that it works by redintegration and also by blending. It is blending when, if two mental elements have got the same content, the intensities of both are more or less combined with a total or partial fusion of the elements. I should say that this process cannot wholly be reduced to redintegration, and whether its existence is compatible with the strict principles of the English school of "association," I do not know. It of course presents some difficulties in general, and raises a number of interesting problems. But, without dwelling on these questions, we may lay down the result that, if an idea engrosses, then any sensation which is connected with that idea may in consequence engross. And attention so far has appeared to consist in interest, either direct or transferred; an account which, we shall find, will hold good everywhere (cp. Waitz, *Lehrbuch*, 634-7).

Let us pass on to the cases where we feel an activity. In

<sup>1</sup> Some psychologists appear to be so taken by the idea of our voluntary muscles that they seem at times to forget the existence of such things as glands and skin and mucous membranes. I would refer the reader specially to those chapters in Dr. Tuke's *Influence of the Mind upon the Body* which deal with the action of the intellect upon the involuntary muscles and the organic functions, or see Carpenter's *Mental Physiology*.

the first class of these we make no resolve, but, performing an operation, we are occupied with our performance. We are writing or reading, and the subject engrosses us. We, I presume, attend, and we certainly seem active, and the question is, What is such active attention, and does it simply once more consist in interest? I have no doubt that it does. The subject may predominate because of the activity, but the activity itself is produced by interest. Why am I active? Because the function of itself is interesting, or because the idea of the result is dominant. The main idea of the subject favours those activities which further its existence, and it lends them its strength. It naturally selects them. Or the idea of an answer to a question which interests creates uneasiness and a coming up and maintenance of any function which serves to relieve. The attention is caused by an indirect interest, for that produces the activity whose subject predominates.

There are some objections which, perhaps, before we go on, should be considered here. It may be said first (a) that no intellectual activity exists, and secondly (b) that the dominant idea could not work. The objections have perhaps not been made in this form, but it will serve to bring out the points of difficulty.

(a) If no intellectual activity exists, and if yet there is *some* activity present in intellectual functions, this activity, it would seem, might be attention. It is not possible for me here to discuss the question of intellectual activities, their existence and their origin, and I prefer to reply, If no activity of intellect then none whatever; for psychology deals simply with psychical processes. I shall return lower down to this general question, but here will assume that the intellect is active.<sup>1</sup> And if so, its activity upon a certain object will (as was said before) result from interest. The objection however may be pressed as follows. Let that be the case, it may be said, where the intellect does something; but what where it does nothing and where yet I am active? In the *retention* of an image or in the *watching* of an object I am certainly active; but where is the intellectual product? The product appears to be mere attention, and if so, the activity must be attention also. I must meet this objection by attempting to show the nature of retention and of observation. The feeling of activity I will deal with hereafter.

What is active *retention*? The image of a person will not

<sup>1</sup> I should say that I decidedly reject the doctrine that active attention consists in comparison. See Lotze, *Metaph.* 540, *Grundzüge d. Psych.* 26.

stay before our minds, or in reflection we fail to keep hold of an idea or maintain a process. We make an effort and succeed, but where is the machinery? The machinery, I answer, consists of an idea which is able to dominate and so fixes an object connected with itself. This idea may be simply the idea of the presence of the idea required. Again it may be some other idea which implies the first and makes a whole with it, a process familiar under the name of Contiguity. This idea will retain partly by means of Redintegration. It has a context which perpetually suggests the idea to be retained as often as that wavers; and this context again is more or less extensive, and therefore self-supporting or self-restoring. And secondly, the idea (as was mentioned before) will strengthen by blending, and so tend to retain. These I think are the means employed for retention, and if so, there is no specific activity. Let us pass to *observation*. When we watch, say a trap, or perhaps a rabbit-hole, or the proceedings in a law-court, what is it that we do? The last example suggests an instructive distinction. When we observe we must do it in a certain interest; but we may either want to see what happens in this or that special way, or generally to see whatever may happen. And the explanation seems simple. The idea of the object changing itself in such or such a manner is an interesting idea, and so naturally causes retention of this object in prominent perception. And where we are said to watch simply the idea is the same, only now indefinite. If I am told to keep my eye upon anything, the idea of my seeing some change is suggested, and my observation is a case of motived retention.<sup>1</sup> We may say then that either there is no activity or that the activities (mental or physical) are *not* a specific attending. Attention will be everywhere a mere example of the common processes of mind, and will consist in the influence of a dominant idea.

(b) Or if it is said that this dominant idea could not influence, the answer is easy. It must be admitted that, by what has been called "Contiguity," the idea of the end both prompts and selects the means which produce it. And the dominance of that idea is surely indisputable. It may not contract the muscles, and may fail even to produce "a nascent stage of the process of innervation" or "a tendency

<sup>1</sup> We should avoid the mistake of treating these phenomena as cases of Comparison. They *may* involve Comparison, but cannot do so from the first, since they certainly precede it. At an early stage there are not two things held before the mind, and so Comparison is impossible. They belong to the same class as elementary Recognition, where we find a sameness or difference without knowing what that is.

to strive" (whatever that may mean), and if the reader is committed to such ideas, I cannot hope to persuade him. But I would ask others to reflect that we have been willing to suppose that the idea prevails through pleasure and pain, and (if you must say so) through desire. All that is wanted so far for a common understanding is the presence of the idea and the denial that its influence consists in a discharge upon the muscles, whether actual or potential.

"Still," the objection may come, "in an act like retention we fix ideas that waver, and we even recall an idea that has vanished. And we are said to do this by 'the idea of the idea'. But an idea must either be there or not there, and cannot be both, unless somehow 'potential'. So that an idea of an idea is not admissible." I confess that the phrase has a certain obscurity, and I do not know whether any one has worked out the detail of its various meanings. But it is not hard to make a sufficient reply.<sup>1</sup> It is plain that we have the idea of an idea. We may be asked (*e.g.*) for our idea of a statesman, and may be answered, 'I do not call that an idea'. 'Tell me then,' we might reply, 'what is *your* idea of an idea of a statesman.' And that means, Give me the general character which such an idea should have. This account will hold good everywhere. The idea of an idea is a psychical state, the character of which is used representatively and contains the feature of being an idea of a certain kind. We may distinguish two varieties. In the first of these the absent idea which I think of is the idea pure and simple, while in the second it will include my psychical state as I have this idea. For example, I possess a general idea of the solution of a problem, and that in the first case contains merely the general character of the answer required, or the principal feature of the necessary process. But if (as in the second case) I think of myself as having the solution or as performing the process, I must represent also the psychical presence of the whole event, of course again only in its general aspect. Thus, if we realised the first idea we should have simply to fill out its logical content, but the reality of the second would give us its actual psychical existence. And with this passing notice I must leave an objection which depends upon a vicious theory that would destroy logic wholly and cripple psychology.<sup>2</sup>

<sup>1</sup> I think that Prof. Bain has given to a kindred question an answer that is somewhat confused, in a note on James Mill's *Analysis*, ii. 358.

<sup>2</sup> The unsatisfactory way in which internal volition is dealt with (or ignored by) the mass of psychologists comes in part from an inability to distinguish clearly between the idea of and the reality of an idea.

To resume then, ideas of ideas are possible, and such ideas can dominate, and the presence of these ideas can produce their own reality. And so far attention has been fully explained as an instance of the working of ordinary laws. But we have still another class of our facts to consider. The cases of attention which so far we have surveyed are in a sense involuntary. In them we had not a resolve to attend. We must now deal with the class where I say, 'I will attend to this matter,' and do so, or where at all events I resolve to perform such an act as implies attention. At this point, it may be said, our explanation breaks down, and here we have a specific and original activity. All before was automatic, but this is volitional and gives us a direct revelation of energy.

But an energy that does what? is the natural reply. I suppose an energy that fixes and strengthens. Well, if so, I am led to remark at once that the presumption is in favour of our old account, because fixation and strengthening was what it explained. If, when I simply attend, that function results from an indirect interest, is it likely that when I resolve to attend we should have to import a wholly new factor and bring upon the stage a supervening agency? Let us examine this more nearly.

When I readily attend to the details of a subject and perform the operations (both physical and mental) that lead to a view of them, or when in general I pursue the means to some end, that, we saw, did not involve any other attention than was explained by the normal working of interest. We must now take the case where, prompted to such application, I am solicited elsewhere, and return to my task after wavering and struggle, perhaps in addition saying to myself, 'I am resolved to mind my business'. And there is a suggestion, it would seem, that in these cases we are met by a difference of principle. But, we ask, where is this difference? In the struggle of ideas and feelings in my mind, and in the inconstant result, there is nothing surely which calls for special explanation, nor most assuredly is there a consciousness of special activity. And if it is the act of resolve upon which stress is laid, then I fully admit that this function must be recognised as differing from others, but I see no reason to think it one kind by itself or as anything but an instance of our general principles. We have seen that what interests occupies our minds, and that it does so directly or indirectly. We have seen that in the latter class we have the working of an idea, and in some cases also the help of an action, physical or intellectual—such action not being an activity of

attention in any specific sense. We saw in short that attention, whether we understand it as the state of our being engrossed, or as an action which brings about such a state, was nothing unique, nothing else but a result and an illustration of more general laws. Thus, if we take interest to mean liking, attention comes from liking, my liking for the thing or for something that implies it, the idea of some person to whom I am attached, or of some pursuit or principle more or less abstract. These interests are ideas which, in the normal course of psychical events, work out their detail by a transfer of liking and support that detail against invasion. We shall see that *resolve* does but illustrate this process.

I am to say 'I will attend,' and am then in consequence really to attend; and on the other hand in our account attention consisted in indirect interest—interest, that is, in a further idea. But here where is the idea? It is not far to seek. If I resolve to attend, I of course have the idea of myself attending. That is, I have either an idea of myself doing this or that work, which work in fact produces attention, or I have an explicit idea of myself attending to something to which the work is in fact a condition. This idea of myself in such a character dominates by its pleasure, or its implication with pain, or its force, or its associations (we have agreed to leave this matter unsettled), and it produces in the common psychological way the means to its realisation. Where is then the difficulty? I have an idea of myself doing this or that, and such an idea may surely be interesting. Or, if it is not so in itself, there are further ideas of myself accomplishing a whole performance which includes it, pursuing (e.g.) the greatest possible sum of pleasures, or acting upon some other principle of virtue. In short, give me the idea of myself somehow engaged, and let that idea give me, indirectly or directly, a feeling of satisfaction or success or self-approval, or in some manner interest me, then, if this idea is connected with means that lead to its reality, it surely will produce them in the ordinary way. The result of attention will follow the resolve without any mysterious 'act' which intervenes, and the phenomenon is explained by indirect interest. It may be said that the idea works *because* I fix it, and that this fixation *is* attending; but the answer is of course that another idea, a still more remote interest, fixes the first one and sets up the process. And if some arbitrary force proceeding from the self is suggested against me, I can only reply that I do not know what this means. I cannot well discuss phrases which convey to me nothing I can find in fact, and which I am compelled to believe are simply unintelligible.

We have now traversed the field which we set before us, and have offered an account of its main phenomena, defective no doubt, but I trust sufficient to answer our purpose. We have found nothing in attention that is not derivative, nothing which could justify our placing it among the primary elements of mind. In attention there is either no activity at all beyond the common processes of redintegration and blending, or, if the activity exists, itself *is* not attention. Any function whatever of the body or the mind will be active attention if it is prompted by an interest and brings about the result of our engrossment with its product. There is no primary act of attention, there is no specific act of attention, there is no one kind of act of attention at all. That is our result, and through the rest of this paper I shall consider some objections and attempt to remove some remaining difficulties.

I will first make a remark on the nature of Resolve. When I determine to act, either now or in the future (and perhaps again only in case an uncertain condition is fulfilled), I am aware of a peculiar state of mind. I do not act and yet I feel myself asserted, forefelt (so to speak) in an unreal action. But this state admits of an easy explanation. Apart from its actual realisation an idea may possess very many degrees of particularity. Now when the idea of an action is opposed by other states, they prevent it from filling itself out with detail in accordance with the reality at present perceived or imagined in the future. But, as the obstacle is from any cause lessened or removed, this idea will in proportion grow more particular, and, if it cannot lead to action, will be largely filled out by ideal detail. This detail will of course contain feelings the same in character as those which would be present in the real act; but there is no need to explain this by a hypothetical physiology, or to raise a mist with vague phrases such as "tendency" and "nascent". The fact is merely that of these feelings the greater part (if not all) will be less intense than they would be in the action, and a varying amount of them will be wholly absent. Still enough will be there to give a sense of expansion, such as we feel to accompany our real actions; and this is mistaken for proof of an inner energy, not derived from common sources, but to be referred to a specific act of attention or some other faculty. I should like to work out this point in greater detail, but I have only room to suggest that any intelligent adherent of arbitrary Free-will should do it for himself.

I will pass next to a kindred source of difficulty. "In

attention," I may be told, "we feel that we are active; we are aware of energy, and we know this directly. In the account which you have given this factor is omitted, since attention comes there as a result from elements that are not active. And we object that the essence of the matter is omitted since the essence is just this revealed activity." But I should reply that, if attention is *not* derivative, the right course is to show my mistake in its derivation. If I have either accounted (or am able to account) for every single thing which your "energy" *performs*, you will hardly persuade me that the feeling you speak of is really effective, or is anything but a concomitant, more or less constant and more or less obscure. And I think that I might fairly leave the matter so. But, since the consciousness of force has been given an importance which is paramount (and I might add transcendent and absolute), it is better to add some further remarks.

I would first suggest that a revelation of activity or of force or of will or of energy (or indeed of anything which answers to a phrase of this sort) is open to dangerous metaphysical criticism. If these ideas can be shown to contradict themselves, then the revelation could be met by an admission of its existence, but also by a denial of the truth of its message; and in England at least I am sure that this criticism has (to speak in general) been merely ignored. I mention this in passing, and I lay no stress on it, since in psychology I do not think such a criticism would be relevant any more than it would be in physics or physiology. But, confining myself to the field of psychology, I utterly deny the alleged revelation. It gives us not a fact but an intellectual construction, and (I should add) a thorough misinterpretation. In the first place I should like to be told *what* it is that the message conveys. Does it tell me of my body or of my mind or of both, and what precisely does it tell me? I have supposed (perhaps wrongly) that psychology is a science which deals with psychical events and the laws of those events, and that the phrase "activity," whenever used, should be explicable in those terms. But though others no doubt may have had better fortune, my own experience is that in our leading psychologies it is difficult or impossible to know what "active" or "energy" means. And since apparently these words stand for something important, I cannot but feel that we have a right to complain. If I may say what I think, the present use of these phrases is little better than a scandal and a main obstacle in the path of English psychology. If one cannot employ them with a definite meaning,

why use them at all? For a psychology that could not get on without them would most assuredly pass its own sentence. And (to apply what I have said to the present case) if the activity which is revealed tells me something about the origin and the nature of those events which we call attention, then, until its message is translated into clearness, we cannot regard it. But if it is meant to be a feeling which gives no message at all, and the question is whether this fact is essential to the process of attention, and again whether and how far we are able to decompose it, then it seems to me that the language applied to this feeling has been strangely misleading. For suppose that a psychical event which we cannot analyse is a necessary link in the process of attending, then from this it will follow that attention so far cannot be explained. But from this there is no passage to a statement about activity, which (whatever it may be) seems certainly complex and largely to be built upon inference from experience.

But on the assertor of such a link in the process of attention lies the burden of proof. Even suppose that a feeling of activity is present, yet we have explained the fact of attention without it, and so we deny its efficacy. And in the second place we remark that a feeling of energy can hardly be asserted in *all* attention, and that it is difficult to say at what stage (if at any) it is always a concomitant. And where it is concomitant, perhaps there we go on to call the attention "active" for no reason but the presence of this delusive feeling, which (so far as we have gone) seems not active at all but an accompaniment more or less superfluous. And if it is said, "But you have not explained this feeling," I might reply that I cannot be called upon to do so. If I do not, does it follow that my account of attention is incorrect? Or, if so, would it follow that *therefore* attention reveals activity or energy or will or any other tidings of the kind? But if this could not be maintained, then perhaps, with a view to make good my case, I should do better to deny the claim of the feeling and to rest on the denial. Still, to throw light on the subject so far as I can, I will offer some remarks on the nature of this much-misused phenomenon.

First let me say that by calling a feeling 'derivative' I do not mean that it comes *simply* from the union of other psychical elements. I do not mean that an emotion is simply those conditions which we say produce it. The conditions, the presence of certain psychical elements, must often, if not always, produce other states before the whole is present which we call the emotion. Of course *how*, for

example, given certain ideas, certain internal sensations follow upon them is an open question; and it is an open question, when those sensations have followed, what part of this mass of sensations and ideas and feelings *is* the actual emotion. I have not to resolve these doubts, but am to point out conditions through which we get, and without which we should not get, the feeling of activity.

This last phrase recalls a shocking ambiguity. A 'feeling of' has at least three different senses. It means feeling simply felt, and that never as yet has been interpreted by and combined with ideas, or feeling recognised as that which is *of* something else, or feeling not now recognised but modified by the results of past recognition. In the first of these cases the 'of' does not belong to the feeling. It belongs solely to an outsider who adds ideas true or false, but in either case derived from other experience. And to predicate these ideas directly 'of' the feeling is a serious error. Now if we take activity at the stage where it is recognised and is felt as such, we can see at once its composite character. It contains the idea of myself changing something opposed, and it contains still more. If I suffered a change from which something else followed, that by itself would not be taken as activity. The change must come from me, that is, I must have an idea of it (if not also a desire), and this idea, or end, must lead to the change. Now I think no one can deny that to be conscious of all this is possible only through a liberal interpretation of much experience. But on the other hand what sense, when these constituents are removed, is left to my consciousness of energy put forth? If there is a feeling which goes now together with this complex and has gone before it, that feeling is *of* energy in much the same manner in which relief from the pains of hunger and cold is a feeling *of* swaddling clothes and *of* milk, or a metaphysical proof of their absolute reality.

But what is the feeling which becomes by experience the feeling of activity? Or for the present let us ask what are its conditions. I think its origin lies in the feeling of expansion that follows upon the enlargement of the self. I have to assume the doctrine that of our psychical contents a certain group is closely united, and is connected in a very special manner with pleasure and pain, and that this group is the first appearance of our self. I have to assume again that this psychical mass, with its connexions, is perpetually growing larger and smaller as against other elements. And I must assume once more that the expansion gives *in general*

a feeling of pleasure, while contraction brings pain, and that we may call these the two chief modes of self-feeling. I must assume all this here and pass over the difficulties which of course beset it. Now the expansion is *not* the consciousness of activity, nor is it a consciousness of the self or the body or a consciousness of anything at all. It merely is and is felt in a certain way. Not till after a considerable growth of the soul (which we cannot here deal with) does there come the perception of a self and a not-self with what is called consciousness. Then when we get to know from repeated experience that changes ensue upon modes of our self (as a body that is conscious, and later as consciousness along with a body), we acquire the notion of activity or will. We are active when the not-self, consisting in external or internal sensation or perception or idea, changes on the presence of an idea, and (I will add) a desire of that change within the self. This expansion of our area beginning from within gives a certain feeling, and it is interpreted as a putting forth of a something from out the self into the not-self—the something being energy or force or will, named in a variety of phrases all equally delusive, and in fact of course being nothing at all. Where the group of the self is contracted by the not-self and a pleasant idea of expansion is suggested, there is a feeling of pressure. When in addition the limit of resistance wavers, and the ideal expansion is realised partly, with a further advance of expansion in idea and perhaps an oscillation of actual retreat and actual advance, there is wavering and a consciousness of tension and effort.<sup>1</sup> In all this there is a happening—a happening of events; there is nothing beside facts coexistent and successive, with the result of other facts. And I think in this way we could give throughout psychology a definite meaning to action and passivity.

I cannot dwell on this outline, but must hasten to consider a point of interest. There is no doubt that in getting from experience (as we must) the idea of self-expansion, the muscular element is most important. But it would be wrong to say that our sense of tension and effort must always come from muscular feeling. In the resistance of an idea that will haunt or escape us, and in the tension of waiting for the issue of a crisis, the origin of the feeling is clearly not muscular. And if it is urged that at any rate the feeling has elements which must have arisen from muscular experience, that, if true, would not be relevant. It would

<sup>1</sup> Cp. Waitz, 301 ff.; Nahlowsky, *Gefühsleben*, 86 ff.

not show that these elements originate the feeling, and it ignores the distinction between a total emotion and its producing conditions which we mentioned above. I have not said that from self-expansion, however strong the ideas and sensations concerned, and however intense the pleasure and pain, would come the entire emotion of activity, strain, effort and success. Not only do the kinds of the elements involved make important differences, but there is a fresh result of internal sensations. This result,—take, for instance, the sense we have of fatigue or elation,—is exceedingly hard to decompose. It seems an obscure confusion or blending of organic sensations from a variety of sources, and I confess that at present I should not feel able to discuss it. I have mentioned it to point out that it does not concern us, for it is clearly no more than concomitant with, or sequent on, what we call activity. If we have hitherto found no revelation of energy, we need hardly look for its original message in this residual oracle of organic sensation.

I have now said all that within present limits I can say on the psychical origin of our sense of activity, and of the meaning we might give to the term in psychology if so disposed, and I must hasten to bring these remarks to an end. But there is one point as to which I may fear misconstruction. It might possibly be said that physiology proves attention to be active, and that this settles the matter. Now of course I am not competent to speak physiologically. I have the sincerest respect for physiologists. I believe them to be men as a class superior in ability to psychologists and surpassing them in devotion, and engaged on a subject to whose difficulties (it seems to me) those offered by psychology are in comparison trifling. But such a question as the existence of a psychical activity is a matter which falls outside physiology. We might get from that science instruction valuable and, in some particulars, even necessary; but suppose that we knew (as I presume we do *not* yet know) the physical side of the psychical process, is it certain that about the main question we should not be precisely where we are now? For in the first place the existence of this or that feeling could hardly be deduced from physiological premisses if actual observation were unable to find it. And in the second place between a process in the brain and a consciousness of energy there is really a gulf which is not to be filled up. You may know from experience that they are found together, but, given the first, you could never have got to the second, and they remain in the end quite heterogeneous. And so I venture to think that,

whether the incoming current stimulates the centre, or the centre discharges on the motor nerves, or the central motor organ puts forth energy also upon the sensory centre, or whatever else may happen, is as regards the main question entirely irrelevant, and, so far as I can judge, seems likely to remain so. And if any one replies, Here is physiological activity with a psychical feeling, and *therefore* of course the latter must be a feeling of activity, I will not gainsay it. I will merely ask him not to vary the meaning of his phrase without giving us notice, and somewhere to set down as clearly as he can what he means by a physiological activity. He should then give us a list of the psychical states where this condition is present, either according to the doctrine of physiologists in general, or of perhaps two or three, or of perhaps himself only. And in this case we may avoid that disastrous muddle of the body and the mind, which may appear "scientific" but can advance no science.

We have now seen that from physiology no evidence can be brought to settle our main problem, and we have already attempted to exhibit the origin of our sense of expended energy. If that account is correct, then a specific activity of attention is no fact observed in the mind, but is a construction more or less fictitious and misleading. And if our account is not correct, that result still remains. We shall have shown that in every stage of attention we require no intervening event, and that a sense of energy (supposing it to exist) would be therefore not essential and probably not effective, but a more or less constant concomitant or result. And, if so, we have accomplished the task we undertook. There are two features however in the process of attention which deserve a passing notice.

Is attention negative, and is it so directly or always indirectly? I think the latter view the right one. When we are engrossed by one thing we lose sight of the others (why this must be so I shall not enquire), but the attention seems positive. And when an idea is painful and perhaps suggests also a prospect of pain, and when because of this character it is weakened or banished (I shall not ask through what means), there is in no case a negative activity of banishment. The attention which banishes is the dominance of an interest exclusive of the first and with a possible dominance of the idea of their conflict. In the latter case the positive interest will be strengthened by a powerful contrast, and attention to the pain will increase its strength and may hasten its disappearance. Further, when we attend to the absence of a certain idea in the sense of attending to

the prevention of its presence, the influence is positive. We have the idea of a certain element being suggested and being found in fact to be incongruous with reality, and we have also (let us say) the desire that this should be so. Hence, when the idea arises, we have (apart from the weakening action of pain) a strong suggestion of its expulsion from the field. And the first chance mental element that suits with this suggestion attracts our notice and is used as the positive side of expulsion. But if the idea of what ought to be expelled is too dominant, the process renews itself and defeats its own purpose. There can be no attention which is merely negative.

Finally we may ask how attention is fixed. We resolve to attend, and we persist in that attitude though the object is not in itself engaging. This is easily explained. In resolving to attend we had, as we saw, an idea of ourselves, and we have in the sequel a constant perception or feeling of ourselves (based no doubt upon our internal sensations) as being here and now and in this or that disposition or attitude. It is this more or less particular perception of self which recalls the resolve, and, in the absence of attention, produces a conflict between the idea and the fact of ourselves. In the same way any obvious external object or internal condition, once connected with the idea of myself engrossed in a certain way by such or such an object, will more or less continually suggest that idea with the usual result. The principle in these cases is one and the same, and the detail of its various applications would hardly serve to make it much clearer.

## II.—THE FINAL AIM OF MORAL ACTION.

By STANTON COIT, Ph.D.

ALL questions of morals resolve themselves practically into these two: What ought to be my final aim in life? and What ought I to do to attain that end? Logically considered, the adoption of the true end of life is only one of the many acts which a man ought to do; so that these two questions resolve themselves into one: How ought I to live? or, scientifically expressed, What is the universal distinguishing characteristic of right action? And yet ends of action in general are so controlling over the affections and appetites, that to adopt the true final aim may be regarded as the one duty of life, and to find out that end the one problem of ethics. For if a man pursues the true end of life, "it will follow," as Bacon says, "that he shall mould himself into all virtue at once. . . . In obtaining virtue by habit, while a man practiseth temperance, he doth not profit much to fortitude nor the like; but while he dedicateth and applieth himself to good ends, look! what virtue soever the pursuit and passage towards those ends doth command unto him, he is invested of a precedent disposition to conform himself thereunto." And one can say of society quite as well as of the individual man that the pursuit of ends commends the proper means and invests of a precedent disposition thereunto. It is accordingly because of this psychological and social law that the determination of the final moral end of life becomes the main problem of ethics. To be sure, there is, as we have said, the broader question as to the universal criterion of right action. But this criterion has no significance except in its application. And it is not sufficient to apply it here and there, in isolated cases, to this or that act, under these or those special circumstances. It must be applied to the one creative act of conduct, the adoption of a final aim in life. In this way, and only in this way, shall we find the formative principle of conduct for the individual and the state; and in finding that we shall have attained—what hitherto has been lacking in ethics—a systematising principle. One might say that the universal criterion determines the circumference, but the final aim locates the centre of moral conduct, and that both are necessary to complete the geometry of righteousness.

Christianity gave definite answers to both these questions. "Lord, what shall I do to be saved?" To be saved was the final aim of life for every man; to obey whatever precepts Jesus gave was what one ought to do. And without doubt the secret of the vast power which Christianity has exercised over the thought and conduct of men has been the intensely personal character and the definiteness of its answers. It directed the scattered rays of a man's moral energy into one burning-point, and thus seemed to give to a man's life a new heat and light. Modern moralists, unable to accept the precepts of Jesus as the final authority or as the complete rule of life, have devoted almost their entire attention to an examination of the origin of moral sentiments, and to a search for the universal standard of right action. The result is that moral scepticism has been refuted; morals is seen to have a common basis with other knowledge. Also a more or less satisfactory standard by which to measure the relative worth of actions and impulses has been found. But that act by which a man shall mould himself into all virtue at once has not been determined, indeed not even searched for. Impulses, self-love, benevolence and the like have been examined and their relative moral worth noted. So, too, the various objects of natural impulse, which men actually pursue, have been considered, and it has been shown that results morally desirable have ensued where not consciously aimed at. Nothing more definite has been done toward deciding what should be the final aim of life. And yet not because the Christian answer to that question continues to be accepted. Rather has the question itself been rejected. There has been a tendency to doubt that there could be a universal final aim of conduct. Wherefore, for the sake of the completeness of ethical science, and because of its practical significance in life, we again put the question: What is the true moral end of life for every man? and we attempt a definite answer.

In our investigation we shall make but one presupposition, namely, that *right* and *wrong* are not merely fictitious qualities of conduct. We start with the simple assumption which, as Prof. Sidgwick says, "seems to be made implicitly in all ethical reasoning,—that there is something, under any given circumstances, which it is right or reasonable to do, and that this may be known". Accordingly the only objection which can be made to the method we pursue is that there is no such thing as moral experience. As to this objection we are of Hume's opinion, that those who deny the reality of moral distinctions may be ranked among the disin-

genuine disputants. We may therefore, undisturbed by any such objections, proceed with our investigation.

Our method will be to find out the universal, distinguishing, characteristic of right action, and, using this characteristic as the standard of value, to determine the relative worth of the various objects that may be proposed as the final aim of conduct.

Whoever will group together all the actions and dispositions of the will which in various ages and societies have received moral approbation, will find a vast majority of them to have as their essential characteristic the tendency to promote the permanent happiness of society. He will find a corresponding majority of those which have received moral censure to have a contrary tendency. Moreover, where deeds positively detrimental to society have been approved, it will be found in general that they were at least believed not to be detrimental, and it will be found that "variations in the moral code of different societies at different stages correspond, at least generally, to differences in the actual or believed tendencies of certain kinds of conduct"; so that neither men's actual approval of conduct detrimental to society nor the variations in positive moral codes can be used as an argument against the acceptance of "the tendency to promote universal happiness" as the distinguishing characteristic of right action. Indeed, if any induction can lay claim to scientific certainty, this can—that under any given circumstances that action is right which tends to increase most the general sum of happiness. So well grounded is this inductive generalisation that it may with perfect security be used deductively and applied as a test to all doubtful cases of conduct that may come up for consideration. And let it not be objected that in reasoning from the common moral judgments of men we can attain only what men have thought was right and not what is actually right. For the method here implied, of which the best illustrations are to be found in Aristotle, Hume and Sidgwick, is not to be confounded with that of gathering the opinions of men on a certain subject, rejecting the points in which the opinions conflict and setting up those which are held in common as the standard of truth. We have not searched for what men have thought to be the essential characteristic of right action, but for the essential characteristic of actions which men thought to be right. If our method had been to gather men's opinions as to the essence of virtue and duty, we never could have arrived at the conclusion that it consisted in the tendency to promote universal happiness. But our method

has been to find out that quality of conduct which, perhaps all unconsciously to themselves, occasions men to affirm *rightness* of any act. And we have found such a quality, and in it accordingly have attained the objective standard of moral worth.

The only moral justification of any act or disposition of the will is the tendency to increase the sum of universal happiness more, under the given circumstances, than any other act or disposition would increase it. This ground of justification will be found to be held implicitly in all other grounds that may be given. And probably no one would ever have objected to it as the standard of moral worth, had not its advocates cast discredit upon it by applying it imperfectly, by choosing unfortunate words in the statement of it, and by associating it with their own peculiar theories of knowledge. They have inclined to convert morals into politics, to regard only "the greatest number" of men as sacred,—to deprecate the moral claims of the individual man. In private morals they have emphasised outward acts to the neglect of inward disposition. They have quite overlooked the subjective side of the moral life. The words that have been most frequently used, "happiness," "pleasure," "utility," could not but cast opprobrium upon the principle they were setting forth. Furthermore, all intuitionists in morals have been held back from appreciating it by the persistence of its advocates in allowing for it no other than a purely empirical basis. And yet it may quite as well lay claim to being an intuition of reason as any of the special duties which have been regarded as such. Prof. Sidgwick goes even so far as to speak of it as that most pre-eminently certain and irrefragable intuition. It is clear, therefore, that in adopting the standard of "Universal Hedonism," one does not commit oneself to any special theory of the origin of morals. This neutrality as to whether the final principle of conduct be *a priori* or *a posteriori* we may perhaps seem to have violated, in speaking of the principle as an inductive generalisation. But in speaking of it in this way we refer merely to the method by which we arrive at a scientific knowledge of it. It may in this sense be an inductive generalisation, and yet at the same time it may have been a regulative principle, an intuition, an *a priori* form of mental activity, guiding and determining the individual judgments out of which the generalisation was drawn.

An adequate explanation and justification of the moral standard we adopt, the purpose of this essay does not permit us to give. We have been able simply to indicate the method

by which we have come to adopt it, and to point out the accidental circumstances which have occasioned most of the objections against it. But the arguments for it in detail, being easy to be gathered from a host of writers, need not be repeated here. And perhaps, too, in simply using it in the special investigation before us, we shall, quite unintentionally, be giving the most impartial and convincing of arguments for it, since the trustworthiness of any standard is best proved by the particular results of its application. Taking therefore as the ultimate criterion of right and wrong the tendency to promote universal happiness, let us now test the worth of the various other objects which with any degree of plausibility may be proposed as the final aim of conduct.

The notion is a common one, that every man should seek his own greatest possible happiness in life. But the pursuit of this object would endanger the welfare of mankind, in the case of all men who did not happen to find their greatest happiness in furthering that welfare. Nor could it be argued that such men were always self-deceived and were not pursuing their true happiness. For, while without doubt men are often mistaken as to what will bring them the greatest surplus of pleasure over pain, and while both they and the world would be happier if they never were mistaken, still such mistakes are not the only cause why men in seeking their own greatest happiness pursue lines of conduct adverse to society. Men's passions and appetites are so adjusted that in the present state of society the greatest happiness can often be derived from a life not in conformity to the permanent interests of mankind. The case might be otherwise in a state where the full social and legal sanctions of right and wrong doing were immediately felt, and where one could not so easily as now escape the consciousness of moral unworthiness. But we must take men and society as they are. The peculiar nature of each individual man in his peculiar social environment is the only point of view from which to determine what would bring him the most happiness. And from the point of view of the man's own nature and environment the pursuit of his own greatest happiness would seldom tend to promote the universal happiness. Nor may we take any other point of view without confusion of thought; for by so doing we can determine only what a man's greatest happiness would be if he were another man. This is, however, exactly the inadvertency into which most of the advocates of Egoistic Hedonism fall. What they mean is that each man should seek what would be his greatest happiness if he were a perfectly moral man. But the per-

fectly moral man is one who loves the right above all things, and his making his own greatest happiness the final aim of conduct would be equivalent for men not perfectly moral to limiting their final aim to the satisfaction of the moral sense. It would be unallowable for them to add certain other pleasures, such as those which arise from health, friendship, the possession of children and the like, since the interests of humanity may demand a sacrifice of all these. Such pleasures might be enjoyed when they come, but they must be regarded only as the accidental accompaniments of a right life, only as that share which may return to one out of the universal fund of happiness. But the pleasure of the moral sense need never be forfeited except with life itself; the pursuit of it would always invest one with the precedent disposition to conform to the interests of mankind, such conformity being the only way of attaining it. It must be admitted therefore that if a man may make at all his own happiness the final aim of conduct, it can be only the happiness arising from one source—the doing of deeds that tend toward universal happiness. He may seek his own happiness only to the degree to which he loves such deeds. Now if to that degree and from that source a man were to seek his own happiness, it is beyond dispute that he would thereby have predisposed himself to the interests of mankind. But if he were not a perfectly moral man by nature, he would not thereby gain his own greatest happiness; he would be compelled to aim at something less. Egoism therefore does not furnish a final aim of life which satisfies the demands of the ethical standard.

Perhaps it may seem that the mere adoption of the tendency to promote universal happiness as the standard of moral worth involves the acceptation of universal happiness itself as the end of conduct. It may seem that if any other end be adopted, it would be equivalent to setting up two final aims of conduct. To this, however, it may be answered in the first place that the psychological act of measuring the worth of every deed and aim according as it tends to promote general happiness is not the same as aiming at general happiness. One might for some reason feel that this latter ought not to be aimed at, and yet at the same time might feel under moral obligation to conform oneself to that way of living which, if unhindered by external circumstances, would actually increase the sum of happiness. The act of conforming to the interests of society is not the same as making them the final aim; therefore it would not involve a contradiction to justify some other aim than universal

happiness on the ground of its tendency to produce the latter. It would indeed be reasoning in a circle to say, for example, that one must aim at one's own peace of conscience because that would tend to promote the general welfare, and then to say that one must do what tends to promote the general welfare, because that would bring peace of conscience. The latter ground of justification, however, being false,—neither the peace of conscience nor anything else than the tendency to promote the general welfare being the true ground of moral justification,—no such reasoning in a circle is involved in the mere adoption of another aim than universal happiness. If the distinction between ultimate criterion and final aim be kept in mind, it will be seen that that object which a man ought to make the final aim need not be identical with that object, the tendency to produce which is the essence of morality. To be sure, the word end or aim might be applied to the latter, and generally has been, but with the result of confusing two entirely distinct psychological acts. Final aim, as used in this essay, means that part of a man's general purpose which is not a means to anything further; consequently, that object the attainment or production of which permits us to say concerning any act or disposition of the will that it has succeeded, and the failure to attain which renders the act a failure. The final moral aim of action would therefore be that object, the failure to attain or produce which would make action a moral failure. In the second place, it should be noticed that not universal happiness but the tendency to bring it about is the truly ethical conception. The sense of duty is satisfied without the actual realisation of universal happiness, but not without the tendency toward it; that is, the act and character must be such that, if unhindered by outward causes, they would produce it. Therefore out of the very nature of morality it might be deduced that universal happiness is not the true final aim of conduct, although the tendency toward it is the standard of moral worth, the sense of duty being satisfied without the former, but not without the latter.

But to determine positively whether universal happiness ought to be the ultimate aim or not, we must consider what the results would be. We find that certain psychological laws of the emotions and will would make it an impracticable aim. The notion of it, on account of its abstractness, would require a high degree of rationalisation in a man in order to take hold of his imagination and stir his enthusiasm. To obtain the vaguest sort of a conception of it is difficult even for minds specially trained to abstract thinking. And per-

haps still more difficult to grasp is the truth of the ethical generalisation that the essence of virtue is the purpose, and the essence of duty the obligation, to increase universal happiness as far as is in one's power. But besides the high degree of rationalisation, an equally high degree of moral development must be reached before the notion of universal happiness can furnish the desired stimulus to the will; the merely sympathetic impulse naturally limits itself to one or a few individuals, so that universal happiness would appeal only to a highly rationalised and moralised sympathy. The love of all men, simply as human beings, is psychologically the latest developed of all the motives to right action. An aim which appeals directly to it is therefore hardly a practicable one. In these respects either right activity itself or the immediate satisfaction of doing right would be more practicable. For to form correct moral judgments as to individual actions and to repeat these actions often is all that is necessary in order to do right for its own sake, and to distinguish the peculiar emotion which attends the consciousness of doing right is all that is required in order to make the inner satisfaction the aim. Either of these aims would require very little power of abstraction and generalisation in order to take hold of the imagination and awaken the impulse to act. Also in the development of the moral feelings the direct love of right and the desire for self-respect precede universal sympathy.

Again, the general welfare is ill-adapted to become the final aim of conduct, because its full realisation is so distantly removed in time. An immediate increase of happiness cannot be made the moral aim, since the immediate effect of right action is often a general increase of pain. Restraint implies pain, and duty demands of us often a discipline and restraint of others as well as of ourselves. "Universal happiness" can mean only the happiness which will pervade society when perfect righteousness has triumphed, together with whatever happiness the advance toward moral victory may admit of. Nothing else can properly be understood under universal happiness. Certainly the mere fragment of desirable consciousness which the advance toward moral victory may admit of could not deserve that name. Therefore to aim at universal happiness would be the same as aiming at the final triumph of justice and joy on earth. Those who especially have advocated as the essence of virtue and duty the tendency in character and conduct to bring about this triumph still have not set it up as the final aim. They have set up right activity itself, or

the immediate increase of social happiness ; or they have not at all taken into consideration what men's conscious purpose should be. On the other hand, with many modern socialistic and religious reformers the direct object of action has been "to create the kingdom of joy ". Now in proportion as the realisation of an object is seen to be distant, its power over the imagination and emotions is weakened. The thought of the final triumph of righteousness and peace on earth kindles the heart and will in proportion as its coming is felt to be near at hand. And socialistic enthusiasts have really believed it to be near, or have thought they could suddenly —perhaps by violence—bring it near. But so far as merely human calculations are to be relied upon, the kingdom of heaven is not near at hand. Accordingly, it is an argument in favour either of right activity itself or of the satisfaction of the sense of duty as over against universal happiness, that their attainment is immediate.

But there is a far more serious objection to the adoption of universal happiness as the final aim of conduct. Its ultimate attainment can never be positively assured. It would therefore be an irresistible argument in favour of any other aim, if, in other respects equally eligible, it could be shown to be unconditionally attainable. Such an end would make despair and even discouragement impossible, and would satisfy the cravings of our nature for what is sure and abiding. But further,—which is of more importance,—only such an object could be an unfailing stimulus to moral effort. The effort to obtain any object naturally diminishes in proportion as the chances of success seem unfavourable ; and it ceases entirely when the object appears to be quite out of reach. Only when we affirm its existence does the thought of a future thing awaken the same emotions and impulses as the image of it, when present, produces. The thought of other existent objects, which would exclude its existence, disturbs the emotions which the thought of it as existent produces. It is true, some men shut their eyes to the facts before them and, rather than lose grounds for hope, project false ones out of their own fancy and desire. But such a device for inventing hope does not deserve a place in any system of ethics. We must rather say that any object would be unfit to be made the final aim of life in proportion as external circumstances could possibly prevent its attainment. The moral nature of man demands an object, which he may be sure no other power in the universe than himself can thwart ; for doubt,—the fear that chance may baffle,—unnerves the will. Now there are innumerable external

circumstances which do now, and may always, prevent the realisation of universal happiness. Historians, economists, statesmen and moral philosophers,—all who are best acquainted with the forces in human nature which determine the course of history,—are never pleasant optimists. The results of their insight and experience are as likely to crush one with a foreboding sense of ultimate failure as to inspire with the hope of ultimate success. Perhaps human society will continue for ever in the same mixed state of vice and virtue, of misery and joy, as at present, in spite of individual moral efforts. Perhaps the majority of men will grow more selfish and short-sighted, and the sum of misery increase. The course of history does not prove the contrary tendency. There has perhaps been a gradual development toward individual self-consciousness and an increasing subjection of nature to the human will, but there is no evidence that human life has become any the happier. History could never be a proof, however, that justice and happiness will finally triumph. The physical, emotional and intellectual energies of the race may become weaker; a period of degeneration may set in. It is a matter which cannot be determined; too many factors in the problem are unknown. If then the final triumph of joy and righteousness on earth be the final aim of conduct, what ground is there for believing that all moral effort may not be in the end thwarted? Suppose right and happiness should finally triumph, still is the race immortal? Would the physical conditions of the universe favour a society of the good? Would such a society be somehow caught up and preserved eternally, away from the conditions of heat and motion that are destructive to organic life? And yet such an hypothesis must be assumed, if universal happiness be the final aim of conduct, in order to secure an unfailing stimulus to moral effort and to prevent moral despair. The belief in the immortality of the race is as essential to a man who makes the final triumph of social righteousness the aim of life, as belief in the immortality of the soul is to any one who makes his own perfection of character and bliss his aim. The thought of the ultimate extinction of all human consciousness is as terrible to a man whose ultimate aim is the realisation of the social ideal, as the thought of the annihilation of one's own soul is to one whose heart is bent upon the realisation of absolute perfection in himself. The former would say concerning society as the latter concerning individual personality: If it be not immortal, let us eat and drink, for to-morrow we die. Therefore, if the attainment of

universal happiness be the ultimate aim of conduct, three hypotheses must be assumed, which have no other foundation than the need of having an aim which is unconditionally attainable. First, it must be assumed that somehow or other universal happiness will triumph in the world, and secondly, that the human race is immortal. And thirdly, as a ground of justification for these two hypotheses, it must be assumed that history and human existence are under the control of an intelligent moral author of nature. These are exactly Kant's premisses and conclusions in his *Kritik der Urtheils-kraft*. He admits the possibility of a man's doing right, like Spinoza,—with no belief in God and no expectation of any advantage to himself in this or another world,—but argues that such a man would be forced to assume the existence of a moral author of the world, in order to have a conception of the possibility of the moral end which is set him. But the need of a thing, even though it be a need arising out of our moral nature, is not a scientific foundation for the belief that the need will be gratified. Nor is it morally justifiable to believe for practical purposes what we have not scientific grounds for believing. Accordingly, if for moral inspiration it be necessary to assume the final triumph of righteousness and bliss on earth, ethics ceases to be a science, and the imperative nature of the moral law becomes a just object of practical scepticism. A practical philosophy of life which men feel to be without scientific foundation, has and ought to have as little influence upon their conduct as a view of the physical world has, which they see to be unscientific. It is therefore no merely theoretical interest which demands the construction of a moral view of life, concerning which scepticism would be impossible. Faith is the very life of moral activity and moral activity the chief promoter of universal happiness. Therefore this one reason alone, namely, that an extra-experimental faith would be required in order to give the needed stimulus to moral effort, is of itself sufficient to condemn the adoption of universal happiness as the final aim of conduct. Now if either right activity itself or the satisfaction of the sense of duty be made the final aim of conduct, at least a consistent moral view of life could be constructed without resorting to the unscientific hypothesis of the final and endless triumph of either individual or social righteousness. Let us then consider these two ends.

The satisfaction of the sense of duty, that is, the satisfaction that comes from the consciousness of doing right, or, as we prefer to call it, the inner moral sanction, must not be

confounded with the delight that comes of merely contemplating moral ideals in general. The latter arises from seeing the ideal realised in another person or from merely picturing it in imagination, while the former arises only from seeing it realised in ourselves in the moment immediately at hand. The one is aesthetic and sentimental, the other moral and practical ; the one, to be enjoyed, demands rapt contemplation amid the creations of poetic fancy, the other demands action and self-examination. This distinction must be kept clearly in mind in our discussion of the inner moral sanction as the final aim of conduct ; for it makes a great difference, whether by *inner sanction* we mean the pleasure of seeing the ideal realised in one's own conduct at each moment, or the pleasure of beholding it in another person or perhaps in some fanciful creation. The latter could be the end of conduct only according to quite another standard of moral worth than the tendency to promote universal happiness. It could be the end of conduct, as Schleiermacher points out, only in a system of ethics where the happiness of the individual is made the criterion of right action. But Schleiermacher's eloquent logic against indulgence in the pleasures of sympathetic emotion merely by means of the imagination, without moving hand or foot for the good of others, cannot be turned against the pursuit of the inner moral sanction as the end of conduct. Shaftesbury may have erred in trying to prove that the pleasure of the moral sense would always constitute the greatest possible happiness,—as though the happiness of the individual were the standard of moral worth ; and Schleiermacher was perhaps justified in maintaining against him, that from the point of view of the individual's greatest happiness the pleasures of contemplating imaginary excellence would have as much worth as the pleasures which arise out of one's own conscious moral action. But from the point of view of universal happiness the former pleasures have not so great worth as the latter ; indeed they are positively immoral,—they tend to divert one from the obligation to act. Therefore it would be perfectly logical, from the point of view of universal happiness, to object to the former and not to the latter as the end of conduct.

The existence of the inner moral sanction and its peculiar nature may be determined by an observation of subjective moral experience. Whoever examines all the states of consciousness which the conviction that one is doing right or is doing wrong awakens will find that those which the thought of doing wrong awakens form a group by them-

selves,—they are all unhappy states of mind ; while the contrary is true of those which the thought of doing right awakens. Self-examination is never agreeable to the man whom his own moral judgment condemns ; the unhappiness of self-condemnation may mount to such intensity and volume as to drive men to the extremest measures for ridding themselves of it. On the other hand we find the conscious fulfilment of duty to be attended by a feeling of happiness which sometimes takes the form of deep inward peace,—such as personal reverence and trust produce ; and sometimes the form of gladness and exultation,—like that of a victor ; while in moments of supreme insight and action it breaks into rapture. We may comprehend all these forms of happiness, and may suggest the corresponding forms of unhappiness which the thought of doing wrong awakens, under the formula : *Inward peace attends devotion to the right.* If now we substitute for the formal conception “rightness” its material equivalent, we shall have attained a statement which embraces not only the individual and subjective but also the social and objective side of morality : *Inward peace attends that way of living which makes for universal happiness.* But at least to the inner sanction which attends a life in devotion to moral conviction men have always testified, whenever they have reflected upon their own conduct. Every philosopher from Socrates to Plotinus and from Spinoza to Schopenhauer has affirmed its actuality and universality, however differently they may have explained it. Out of it all reflective literature has drawn both form and substance. It is the burden of the Bibles of the world. It seems to be the central fact of religious experience. But the best proof of the existence of this great fact of subjective moral experience and of its actual power over the thought and conduct of men is to be found in the cardinal doctrines of life which Buddhism and Christianity teach. For without doubt the Oriental doctrine of the attainment of Nirvana through self-renunciation, and the Christian teaching of the new birth through repentance and faith, had their empirical basis in the deep inward peace which the founders of these religions derived from holiness of life ; while on the other hand Oriental pessimism and the Christian doctrine of sin had their empirical basis in the prevalence of moral self-condemnation among men. This peace the holiest of men have felt the most fully ; and all men have felt or may feel it in some degree and at times. It is a form of happiness which is bound up in the very consciousness of doing right ; it is attainable every moment of our conscious lives, and no

external power can rob us of it, except by robbing us of consciousness itself. "Our pleasures and pains generally," says Grote in his essay on the philosophy of morals, "are derived from the attainment of various objects foreign to ourselves; we desire those objects and try to attain them; our gratification depends upon success. The pleasures and pains of the moral sense, on the other hand, are not derived from the positive attainment of any object foreign to ourselves; they are derived from reflection on our own conduct in the pursuit of it. The satisfaction of the moral sense is independent of the actual results; it is not contingent upon success or failure; no external impediments can disappoint it." In other words, the conviction that one is doing right is the single condition for the attainment of the pleasure of the moral sense. It is therefore unconditionally attainable, since any sane man may know whether he thinks he is doing right or not. Accordingly the inner moral sanction would be at least a possible final aim for all men. If any one should affirm the contrary, he would unwittingly remove the very foundation of morals. He would imply that it is a matter of individual temperament or education, whether or not the reflection upon one's own conduct always pleases or pains according as it seems right or wrong. But this is equivalent to denying not only that there is an objective right and wrong, a common standard of action for all men, but that there is even a private standard for each man. In some men, according to this view, there may be no approval of conscience, no pleasure attending the belief that they are doing right, and no self-condemnation at the thought that they are doing wrong. But if there are such men, they simply drop out of our consideration entirely; they lack the proper moral faculties, and to propose to them any other final moral aim of conduct would betray as much lack of judgment as to propose the inner moral sanction.

But perhaps in saying that this would not be a possible end for all men, one would only mean that it would not constitute a sure test that their actions were objectively right. And certainly this is true. Various men might attain the approval of conscience by pursuing conflicting lines of conduct, since the pleasure inevitably attends the conviction that one is doing right, and the conviction itself, like all others, if not submitted to some objective test, is at the mercy of individual whim, temperament and education. But the final aim need not be an objective test of right action; that it stand the test, whatever that may be, is sufficient. Now to test the relative worth of the inner sanction as compared

with right activity as the controlling end of conduct is the special purpose of our immediate investigation.

The possibility of the inner sanction as the final aim might be again brought into question by those psychologists who trace all motives back to self-love. They might offer the objection that not every man would find in the moral sanction his own greatest possible happiness, and that for such men it would be a psychologically impossible aim. But their theory of human volition is at fault. They do not distinguish between a man's always following his strongest motive and his aiming consciously at his own greatest happiness for the moment or on the whole throughout life. The theory that all motives are forms of self-love we cannot refute here. We can only refer those who hold it to the arguments of Hume and Sidgwick against it, and to the analyses of the emotions in Aristotle and Butler, who continually recognise extra-regarding motives.

If the inner moral sanction be made the final aim of conduct, the ultimate rule of right becomes: *Let thy final aim in life be thine own peace of mind in doing what in thy best judgment tends toward universal happiness.* If right activity be made the end, the rule becomes: *Let thine aim be neither inward peace nor the outward results of thy conduct but the conduct itself, the deeds which in their nature tend toward universal happiness.* These two aims are alike in that they both are immediately and unconditionally attainable. They are unlike in that the latter implies an absolute worth in right activity, while the former attributes to it only a relative worth; the latter is objective, while the former would induce a subjective turn of thought; and the latter is practically less well adapted than the former as an exciting motive to action to beings of an imperfect moral nature.

If a man must set the final wish of his heart upon right activity itself, it must be because such activity has worth out of all relation to human consciousness, an absolute worth. And indeed it was exactly upon this notion that Kant constructed his theory that deeds must be done without regard either to external results or inner satisfaction. Now in no other sphere of human experience is any form of human activity made an end out of relation to its effects upon human consciousness. If right activity then be the final aim, morality becomes an anomaly in life, becomes something mysterious; and to explain it resort must be made again to an extra-experimental hypothesis. The expression "absolute worth" is a *contradictio in adjecto*. To avoid this contradiction and still hold to the notion that

right action has worth out of relation to human happiness, we must assume that such actions bring happiness to some other being than man. But this hypothesis is not scientifically justified, since the worth of right action, in cases of external failure, can always be sufficiently accounted for by the immediate satisfaction it conveys the doer. Kant's statement that a good will would shine like a jewel for itself, as something which had full worth in itself, is certainly true. But does a jewel shine except in relation to the eye that beholds, and has it worth except in relation to the delight in seeing it? So with a right act. It shines and has full worth in itself, for the mere beholding of it in ourselves or another is a joy. A will, seen to be good, gives immediate delight. In this sense it has absolute worth. It is independent of all external success in the attainment of an external object or in the production of any future happiness in ourselves or in others. But to say that it has worth out of all relation to consciousness is, from an empirical standpoint, absurd. To remove this absurdity, resort must be made, as we have shown, to metaphysical theories which have no scientific foundation. And such resort has continually been made. Metaphysical theories are brought in to justify the belief in the imperative nature of the moral law. But if such theories must enter into ethics, ethics ceases to be a science, a door is opened to scepticism. Now the advantages of gaining an inspiring moral view of life without transcending the sphere of inner and outer experience, without resorting to "*the thing-in-itself*" or any extra-temporal existence, would equal the advantages gained by having a point of view which does not require for moral inspiration personal immortality or the immortality of the human race. But before we can gain such an ethical view of life, we must remove the chief occasion for transcending moral experience. This occasion has lain in the felt need of an explanation of the absolute worth of right action. Now, in the first place, the whole logical difficulty is removed when the relation of right activity to the immediate delight which it produces is borne in mind, and when the moral impulse, the love of right, is seen to lie in human nature itself. This delight is that in relation to which the deed always has worth; furthermore, it constitutes a proof that the moral impulse has its root in human nature itself. In the second place, the natural inclination to ascribe a transcendent significance to right action would be checked by setting up as the end of conduct the immediate satisfaction in doing right in the place of right activity itself.

It is true that the rule: " Set thy heart neither upon inward peace nor outward success but upon right action itself; Do right for its own sake," has a tone of sublimity about it. But the reason is that its significance transcends human experience. It suggests the feeling that the moral law is not for the sake of man but for its own sake or that of some unknown being. Its sublimity is therefore not due to the moral exaltation which it awakens but to the sense of mystery.

It is a fact worthy of notice also that those philosophers who set up the activity itself as the aim have never done so on the ground that it would conduce most to universal happiness. One might say that Kant had no reasons at all for making it the final aim, since he simply asserts as a primary fact of moral consciousness that a moral will does have absolute worth, and therefore is an end-in-itself. His whole theory, however, of the relation of moral action to the emotions is so defective that his rejection of happiness in any form as the aim of conduct deserves little attention. He thought feeling ought no more to be the impulse than the aim of action. The Stoics also made virtue itself the end of action. But their reasons were quite the opposite of Kant's. They defined virtue as action in accordance with nature. All emotions they regarded as contrary to nature; therefore, no form of emotion ought ever to be the end of action. But both the premisses of this syllogism are arbitrary. Is it an intuition of reason that what is contrary to nature ought not to be aimed at? The Christian consciousness would not assent to such a statement. And is it a fact of experience that emotions are contrary to nature? Surely, under any of the numerous definitions which one might take, it would seem that nothing is more natural than emotion.

The subjective turn of thought which the inner moral sanction as aim would induce distinguishes it radically from right activity as the aim of conduct. And as in the former point of difference, here too we find the inner sanction to be the more conducive to universal happiness. It is sometimes argued that a subjective turn of thought takes the zest out of pleasure. But to this it may be answered that there could be no greater blessing to mankind than that certain pleasures should have much of their zest taken out of them; they are too keen, they tempt men to injustice and intemperance. And these are exactly the pleasures which moral introspection would damage. But it must be admitted also that certain pains would be intensified by self-examination. It would sharpen the tooth of a gnawing conscience. And yet

this increase of pain might work to the general good. Also the sorrow of sympathy would be quickened. In short, introspection would decrease sensitiveness to pleasure (*ἡδονή*) and its opposite, and increase sensitiveness to joy (*χαρά*) and its opposite. These effects, however, would help to promote the general interests of society. It may be further argued, in favour of an objective aim, that introspection is an abnormal, unnatural direction of thought. And certainly it is true that relatively to other faculties introspection develops late and seldom to a high degree, although in every person it develops sufficiently for him to observe the inner sequences of conduct. Indeed, whoever betrays evidences of remorse or of moral self-respect shows a capacity for moral introspection. The chief reason why it does not develop more highly in most men is because their will is bent almost wholly upon the attainment of external objects, and their intellect turns immediately in that direction. Moreover, in most men the will is not only attracted toward the external objects but repelled from the objects of internal moral observation. It requires, however, only that the will be bent upon some object, which for its attainment demands introspection, and the intellect will show itself equally capable and obedient as before. An introspective turn of thought, therefore, cannot be objected to on the ground that it is an unnatural use of the intellectual faculties: it is only a higher use. But if not unnatural, introspection, it is argued, is at least for practical life morbid and dangerous. And surely this argument is well taken if by introspection is meant the attempt to bring before the imagination certain abstract conceptions and to picture these as realities, in order to excite the emotions in the contemplation of them. Such a habit of thought is certainly morbid and dangerous both to the individual and society. And certainly the inner moral sanction should not be made the end of conduct, if it would induce this habit,—a habit that has been the most fruitful mother of all sorts of illusions, idolatries and vain speculations. Because of it, there has been no clear separation, in the consciousness of men, between what is really fact in the inner moral experience and what is mere inference. Facts, fancies and metaphysical explanations are all fused into one mass. In connexion with their inner moral life men are continually testifying to matters which in their very nature are incapable of being experienced. The result is that men of scientific habits of thought have been tempted to reject such testimonies entirely. They have suspected that all emotions arising from moral contemplation are based on

illusions. But the habit of attempting to picture abstract conceptions before the imagination until they seem real cannot properly be called introspection. It is indeed subjective, but it is only one kind of subjective thought. Practically it is the very opposite, in its effects, of observing and tracing the connexions of actual inner experience. There could be no better way of preventing the former than by practising the latter, that is, by observing emotions and tracing them to their causes. For this practice would reveal what was illusion and what was not, and any emotion seen to have been based on illusion would cease to exist. Now this healthy kind of introspection is the subjective turn of thought which the inner moral sanction, when made the end of conduct, would induce. For men could not then fail to see the natural, causal connexion between devotion to the right and the joy which accompanies it; and seeing this connexion, they could no longer regard "the rapture of self-renunciation," "the peace that passeth understanding," as a sign out of some metaphysical, extra-temporal world. It would no longer be a testimony of some mysterious "higher order of being" to which we belong, but simply of a higher order of conduct to which the human heart responds,—a more blessed way of living. And recognising, simply as a fact, that peace does come of devotion to the right, men would rest there. It is safe to say that they would find their "moral need of metaphysics" satisfied without metaphysics. They would no longer need a substance or a being for their support in the hour of trial and tribulation. The metaphysical need is simply the need of something to rest in, something eternal, unchangeable, and at the same time strong and tender. Just such a support can be found in the fact of universal moral experience, that peace against all the woes of life attends complete devotion to the right. Now the recognition of this fact would follow inevitably from reflection upon one's own conduct; and a predisposition to reflection upon one's own conduct would follow from making the inner moral sanction the final aim of conduct, since reflection is the very condition on which the sanction is attainable. Therefore, making the inner sanction the final aim of conduct, by turning men's attention to the simple sequences of the moral consciousness, would tend to dispel all fantastical and metaphysical illusions which have gathered about the deeper experiences of the moral life.

And especially in the present crisis in religious and moral thought throughout Christendom is there an urgent need of more exact moral introspection. Wherever Christianity has

been taught, men who have consecrated themselves to a right life have interpreted both this consecration and its sequences upon their own intellect, emotions and will, from a theological point of view. They have turned their attention more to the transcendental cause of their experiences than to the experiences themselves. They have regarded these as too sacred for scientific examination, or as in their nature inscrutable. The consequence is that the deepest moral experience of mankind during the last eighteen hundred years has not received just scientific investigation. To be sure, the testimony of Christians concerning their religious experience has not been critical; still, it is of priceless value to ethical science, and in return ethical science would become of priceless value to religion. For the latter is in need of a scientific basis, and ethics could furnish it with such in those sequences of moral consciousness which are the empirical correlative of its theological dogmas. And, on the other hand, ethics would find in the truths of subjective religious experience the spirit which should animate its rules. But a more subjective turn of thought is needed, not only on the part of scientific moralists, but also on the part of society at large; for the scientist here must use the observations of as many men as possible to supplement the results of his own inner experience. No doubt it is possible for men to become too introspective, just as it is possible to carry anything else to extremes; but that degree of introspection which a subjective final aim would induce would not be excessive. And if to make the inner moral sanction the centre of attention or the sole interest throughout life would predispose one too strongly to a subjective turn of mind, that is a very different thing from making it the final aim. There is no practical reason why, nor is it psychologically possible that, any final aim soever should remain the centre of attention to us. The boy who has an appointed lesson to get will fail to finish his task if he keeps all the time thinking about finishing. Yet, on the other hand, the boy who loses himself in the details of his work is also in danger of not finishing. It is necessary to the accomplishment of any end that the attention be turned from it to the means of accomplishing it, and yet not turned so wholly away that the end drop entirely out of sight. It would be, on the one hand, a confusion of thought or of words to say that an object was the end of a certain action and at the same time to admit that it was not consciously striven after; for *end* means something consciously aimed at. But on the other hand it does not follow, because the

end must be consciously aimed at, that it must always be the centre of attention. It is natural and normal for the will to allow the final aim to move from the verge of consciousness to the centre and back again, according as may best serve the end itself. This is the psychological analysis of the normal relation of any final aim of life that may be proposed to the centre of attention. We might say that, until it becomes his own private aim, a man ought to hold the true moral end of life in the centre of attention. But if he continues to hold it there he will become morally inactive and fail to attain the end. On the other hand, if he devote himself exclusively to the means, he will be in danger of converting them into ends and thus failing. It is therefore a psychological law concerning ends in general, and not any peculiarity of the inner moral sanction, that makes it unfit to be the centre of attention.

That the final aim cannot be the sole interest of life is in accordance with a kindred psychological law, *viz.*, that when we turn our attention upon external objects, no matter what they may be, men, animals, plants, the earth, the stars, we cannot remain quite indifferent to them nor treat them as mere means to an end. Such indifference would be so unnatural that, if anyone should manifest it, he would seem more like a monster than a man. The degree of our attachment to external objects becomes deeper the longer and more intently we occupy ourselves with them, and also the more points their nature has in common with ours. Accordingly in proportion as we pursue the inner satisfaction that comes of devotion to the right, we shall love our fellow-men. For at least the greater part of devotion to the right consists in justice, and in order to be just we must attend to our fellow-men. They therefore will become the centre of interest to us,—not because our end is served by them, but because our thought is directed upon them and our nature is the same as theirs. In short, to whom the inner moral sanction is the final aim of conduct, to him is mankind the centre of interest and right conduct the centre of attention. Therefore we must conclude that to make the inner sanction the end of moral action would induce the golden mean of introspectiveness,—between the too much that would arise from making it the centre of attention and interest and the too little which now prevails among men and which an objective aim would not increase.

In determining the relative adaptability to human nature of the inner sanction and the activity itself as final aim of conduct, it must ever be borne in mind that the purely moral

impulse is one of the weakest of all in human nature, and the great problem of ethics is how to strengthen it. If it were the strongest, it would excite men to right action on the mere presentation of opportunity as immediately and naturally as the impulse to eat excites to action at the sight of food when one is hungry ; and there would at least be no occasion for making the pleasure of the sense of duty the end of action. This pleasure would be attained without being aimed at. The mere impulse to do right, in the nature of things, precedes the knowledge of the attendant pleasure ; and if it were strong enough by itself always to determine action, possibly aiming at the pleasure consciously might mar the perfect action of the moral nature ; indeed the very thought of aiming at it, once creeping into the fancy, might prove the first occasion to evil. Therefore in reference to beings of a perfectly holy nature it may be true that they would not seek the pleasure of conscience, since so doing might not tend in their case to universal happiness. But the task before us is to apply the standard of right action to men in whom the moral impulse assumes the form of a feeling of obligation and not of mere inclination, a feeling of claim and not of craving. Men do not hunger and thirst after righteousness. And this changes the whole aspect of affairs ; so that to offer men the blessing that comes to those who do righteously might be the very, indeed the only, means of creating the hunger and thirst. This would accord with the psychological law by which deeds done for the sake of the attendant pleasure transform themselves into deeds done for their own sake. One might say that to make the inner moral sanction the aim of conduct would be the last step in the moral education of the race and of every individual man. There is a stage when to set merely legal sanctions as the aim of conduct has a moralising influence and tends to make men love the right for its own sake. A higher stage is reached when only social and religious sanctions are set ; here, as Shaftesbury and Lessing have shown, the transition to a controlling, impulsive love of right is easier and surer. But the highest stage of all is when no other reward is set than to stand unblamed in the light of one's own moral consciousness. And who has ever outgrown this stage of moral education ? Will the human race ever outgrow it ? In the present state of society the consequences that would come of removing even legal and social sanctions from right action are too terrible to bring before the imagination. And as for the thought of removing the incentives which the expectation of self-condemnation and self-approval gives, it

spreads a strange moral alarm through the heart of even the best men,—so deep is the consciousness of moral weakness. If anyone betrays self-security, as if he felt no need of even the inner sanction to keep him in the way of duty, no further proof is needed either that his self-examination has been superficial or that his ideal of duty is low. Nay, to strive for the inner moral sanction will never cease to strengthen the moral impulse in human beings, and thereby to further the interests of mankind. If it ever does, the moral impulse will have ceased to be a sense of obligation, and ethics will be no longer a science of what men feel that they ought to do.

But there is a deep-seated sentiment in the moral consciousness of civilised men which seems to oppose the adoption of the inner moral sanction as the end of conduct, and which, if really in antagonism to it, forms a strong argument against it. For the moral judgments of an enlightened society embody the accumulated wisdom of ages as to what will in the long run tend most to universal happiness. We must therefore analyse this sentiment and see what the exact truths are which it shadows forth, and whether these conflict with the end of action which our arguments thus far have led us to regard as the true final moral aim of life. "It is commonly thought," to use Prof. Sidgwick's very just statement of this sentiment, "that an act in the highest sense virtuous must be done for its own sake and not for the sake of the attendant pleasure, even if that be the pleasure of the moral sense; and if I do an act for the sole desire of obtaining the glow of moral self-approbation, which I believe will attend its performance, the act will not be truly virtuous". Now doubtless the moral judgment of anyone instantly assents to this. In the first place, to do an act for the *sole* desire of obtaining the glow of moral self-approbation, to have no elements whatever of pure benevolence in the motive, and no tendency to become lost in the deed itself, would indicate an abnormal and monstrous state of mind in the doer,—a state in which it would probably be impossible to have any judgment at all concerning right and wrong or any feeling of self-approbation in the consciousness of doing right. But we have already seen that an object, by becoming the final aim, does not become the sole desire. Therefore in this point the demands of the popular sentiment do not conflict with the adoption of the inner sanction as the last desire of the heart, as the object whose attainment would prevent any act or enterprise or life from being looked upon as a failure.

In the next place, the common sentiment, as generally expressed and as Sidgwick has stated it, wins our assent to its truth, because the words "pleasure" and "glow" always suggest, in spite of acquaintance with their philosophical use, the feeling which attends the gratification of the animal appetites; and the thought of a man's doing right, in order to obtain that kind of pleasure, is morally revolting to us. The two kinds of pleasure are wholly unlike. They spring up in the mind, and are associated with entirely different sets of ideas; their effects, too, upon ourselves and society are entirely unlike. They are what might be called antagonistic pleasures. Their only resemblance is that they are both states of mind which, considered in and for themselves, are desirable. No word in language is abstract enough to embrace them both and not bring them too near together. It is safer to use distinct words for each. If instead of "pleasure of the moral sense" the more appropriate words "peace of conscience," and instead of "glow" "joy" be used, our assent to the common opinion is apt to be less hearty. Therefore, so far as the popular sentiment against the pursuit of the pleasure of the moral sense is due to the association of this with an unworthier form of pleasure, so far it does not constitute any argument against the inner moral sanction as the final aim of conduct.

Again, much of the plausibility of the argument comes from the antithesis made between "done for its own sake" and "done for the sake of the attendant pleasure". When we examine our actual moral experience, however, we find no such real contrast. A deed originally done for the sake of the attendant pleasure, as it becomes more habitual, is apt to be done with less and less thought of the pleasure, until it is finally done for its own sake quite mechanically. Also in proportion as deeds are sudden, the attendant pleasure, although it were the original aim, recedes into the background of consciousness, and in moments of supreme urgency vanishes entirely. This transition of aim from the pleasure to the deed is as natural in the case of deeds done to obtain approval of conscience as in any other case; so that the popular antithesis is psychologically unwarranted. And it would be hard to see how deeds which, through habit or suddenness, have come to be done for their own sake, are on that account any more virtuous. If through habit a man should entirely outgrow the need of the inner sanction as incentive, he would not be more virtuous but rather the more mechanical; what is done from habit is commonly regarded as having no moral worth. That class of deeds

done for their own sake which awaken such lofty admiration are not the class which through habit are done for their own sake. But such deeds, while in themselves not more virtuous, are better signs of the settled disposition of the doer, and thus justify the preference given them by men in general. And yet, as we see, here also the popular sentiment cannot be brought against the inner sanction as final aim.

But there is still another ground for the popular sentiment. Since the original impulse to do right precedes the knowledge of the pleasure, only the act which springs out of this impulse would deserve to be called in the highest sense virtuous. But it is human nature itself which, measured according to this standard of virtue, is found wanting; and this weakness in human nature is really a reason for, instead of against, the inner sanction as end of action.

This aim may perhaps still be objected to on the ground that it would not be an entirely disinterested aim. But from the point of view of universal happiness it makes no difference whether it be purely disinterested or not. As Bishop Butler says : "We may judge and determine that an action is morally good or evil before we so much as consider whether it be interested or disinterested". The only question is whether an act or an aim increase the universal sum of happiness more than any other act or aim would. Kant, as we have seen, by no means proved that absolute disinterestedness is essential to rightness of motive, but only that no other reward should be sought than the satisfaction of beholding the good will in ourselves. Now in this relative sense it may be said that the good will is disinterested. This use of the word would be justified by analogy. The artist who seeks no other reward than the delight in creating a thing of beauty is said to be disinterested in his art. Although his motive is not benevolence, still it is also not self-love. It is the love of delight in beauty, and this desire can be traced back only to the love of beauty itself as an original impulse in the nature of the artist. Likewise when a man seeks the peace of conscience, his motive is the love of delight in goodness, which springs not out of love of self but out of an original natural impulse, however impotent, to do right. Furthermore, deeds, in this relative sense disinterested, may be said also to be "done for their own sake," since the attendant pleasure is an immanent effect of the activity. This is the sense in which Hume would use the words "done for their own sake". At the close of his Essay "Concerning Moral Sentiment" he speaks of virtue as "an end," as "desirable on its own account, without fee or reward,

*merely for the immediate satisfaction which it conveys*". The words "merely for the immediate satisfaction which it conveys" are added in opposition to the expressions "an end" and "desirable on its own account, without fee or reward," in order to explain their meaning. And indeed if this immediate satisfaction, the inner moral sanction, be not meant, what possible sense can there be in saying that "virtue is its own reward" or is desirable on its own account?

Further, upon close psychological analysis it seems to be impossible for a man to do a deliberate deed of virtue and not do it in part for the sake of the satisfaction of conscience. It seems impossible deliberately to cut off desire for all external and internal effects of an act. And we find that "common sense" does not demand it. On the contrary, men of stalwart moral nature are prone to resent purely altruistic or objective motives as an explanation of their deeds. The acts of greatest self-forgetfulness they try to explain as having been done at bottom for themselves. The biographer of Abraham Lincoln, of whom Emerson said that "his heart was as big as the world," tells a homely story of him which illustrates the healthiest moral consciousness on this subject. One day Lincoln was riding along a country road, when he noticed near by a pig making great efforts, but in vain, to get out of the mud into which it had sunk. Lincoln rode on a mile or two, then turned round, rode back, took planks and boards and lifted the unfortunate animal out. The exploit becoming known in the neighbourhood, a friend remarked to Lincoln the next day: "You must be a very unselfish man, Mr. Lincoln, to have helped that pig out of the mud". "Unselfish?" replied Lincoln; "why, I did it for my own sake, not the pig's!" Whenever the question of duty is not clear and deliberation is required, the doer cannot help seeing that the highest motive is to gain his own self-respect. And such acts, although known to be done for the approval of conscience, would gain for the character of the doer, if not such intense admiration as is gained by deeds done with no thought of the inner satisfaction, still as deep trust.

Besides, if we remember that the uncritical mind is always disposed to regard the deeper moral emotions as having their root, not in the mind itself, but rather in some external power, we shall see that the moral consciousness of men is in fact on the side of the inner sanction as the final aim of conduct. We find Christianity, for example, offering its consolations and urging men to seek the comforts of

religion, "the joy of the Lord," the blessing of the Holy Ghost, the love of Christ. The Christian consciousness knows nothing of doing deeds "for their own sake". Whatever asceticism Christianity may contain, it has never demanded the renunciation of the peace and joy of self-denial. Rather has it made the inner moral sanction not only the controlling but the exclusive aim. And doubtless this exaggeration of zeal, together with the mystical interpretations given to the spiritual emotions, has cast discredit upon the pursuit of a subjective moral aim. But at least it must be admitted that the Christian consciousness affirms the pursuit of the peace that comes of devotion to right to be in the highest sense virtuous. And as to the common moral judgment of the Greeks on this subject, if we regard Aristotle's judgment as a fair expression of it, it is at least not adverse to making the pleasure attending right activity "the highest good". For Aristotle refuses to distinguish between the right activity and the accompanying pleasure. He says that the pleasure belonging to the activity is more nearly related to the activity than is the desire for the activity, as this is separated from the activity both in time and by nature, but the pleasure stands very near; and it is so hard to separate the activity from the pleasure that one may doubt whether the former is not one and the same with the latter. Aristotle seems to approach Spinoza's thought, that the delight in right activity *is* virtue. At least, since he seems to oppose a separation of the two and to admit that doing a deed for its own sake may be one and the same with doing it for the attendant pleasure, his testimony may also be counted on the side of the inner moral sanction as the highest good. And in the post-Aristotelian development of ethical thought, however divergent the abstract theories may have become, in their practical outcome they seem all to have agreed that the highest good was the conscious satisfaction of virtue itself.

Of the many effects of adopting this aim none is more prominent and characteristic than the supreme worth with which it invests each passing moment of life. With this aim a man can no longer look upon his life as a process of gradual development toward perfection, in which each moment and day gets its meaning from its relation to the future. It is as if he were taken out of time. "To be eternal in every moment," says Schleiermacher, "that is the immortality of religion." A man's life will then appear to him like a process of crystallisation. The process may have only begun, but the crystal is already there. From the

beginning of the process to the end the form is never unfinished. The beginning and the end meet in one and the same moment of time. The activity and the joy, the deed and the sanction, are the alpha and omega of the moral life. No longer can the future be for ever looming up before the imagination in exaggerated shapes and colours, since the aim of life does not lie there. And at the same time a man will be freed from the spectre of his past self. Neither his past nor his future but his present activity will be the source of his moral pleasures and pains. Herein we find the ethical correlative of the Christian doctrine of the forgiveness of sins; in complete consecration to present duty one feels and knows one's self freed from one's past transgressions. And naturally when a man's past self vanishes, it takes with it the personal hopes and dreads which it had cast over his future.

Again, when the moral aim of life is to be attained each moment afresh, the attention and interest naturally turn upon the actual duties and relationships immediately at hand. This gives the pleasures and pains of the moral sense something of the vividness of perceptions and physical sensations. The moral emotions have been weakened and the moral energies dissipated by association, in the imagination, with the distant past and future—as if there were no real cause for these emotions in the contemplation of one's actual, immediate conduct and motives, and no immediate demand for moral energy in the present sufferings of men. But by increasing the moral dignity of each passing moment the inner sanction as aim would increase the worth of all kinds of thought and feeling at the same time. It would moralise the whole man. As might be expected from the true final aim, it would so predispose a man to all virtue at once, that all the subordinate duties of life would, as it were, fall into order of themselves. In the first place, it would induce reflection upon one's own conduct. This reflection is one of the highest of mental activities, and thus the pursuit of the approval of conscience would have a directly rationalising effect. It would tend, without a special conscious effort on the part of the doer, to the exercise of the mental side of life, as opposed to the physical. Further, it would develop directly a man's consciousness of his own moral individuality, and with that the love of personal liberty on the one hand, and the sense of personal, moral responsibility on the other. Every man would come to feel himself, as Kant would desire, a moral and rational end in himself. Again, to make the inner moral sanction one's

final aim in life is the positive side of the act of self-renunciation. It would therefore bring with it the peculiarly Christian virtues of humility and self-denial. For if a man pursues peace of conscience, he renounces his own greatest pleasure, in that he binds himself to the conditions inexorably set in the nature of things for the promotion of universal happiness.

But the notion of the final aim of conduct has significance not simply for each man separately. It is equally important in the solution of social questions. It sets for us the moral social ideal. That must be a state in which every man pursues the true aim of life. From the mere notion of a state of universal happiness we cannot deduce the relative proportion in which the various human appetites and desires are to be gratified. But add to it the notion of the universal aim which will best promote universal happiness, and we get a useful conception. Those desires and activities are to be chiefly gratified and stimulated which psychologically are found to lead to the adoption of that aim, and those repressed which hinder its adoption.

The social ideal is a state of universal happiness *and* universal virtue. Not every increase, therefore, in general happiness is to be called a moral advance, but only those social changes which make men's characters tend more to promote the common welfare. And yet, if the inner satisfaction of living in conformity to the interests of mankind be the highest aim of conduct, moral reform becomes a message of glad tidings to men. It is instructive to note what pleasures our secular philanthropists suggest in despair of anything more effective, for the poor and illiterate, as a foil to baser pleasures. Is there, then, no pleasure of the moral sense to promise men and assure them of? What the poor, what the illiterate, what all men need is fellowship in the moral life. For through such fellowship the neglected moral instincts are cherished and strengthened.

### III.—ON PLATO'S *PHAEDO*.<sup>1</sup>

By D. G. RITCHIE.

#### I.

BEFORE we can answer the questions: 'What are Plato's arguments about the soul's nature and destiny?' 'What is their relation to one another?' 'What is their value?' we are obliged to consider how far the expressions used by him are to be understood literally.

Plato's visions of another world have fixed themselves indelibly in the common consciousness of Western civilisation. We hardly know, without the most careful examination, how many of those beliefs that are often spoken of as if they were peculiar to Christianity are due directly or indirectly to Platonic influence. Thus, even if it should be the case, as Hegel<sup>2</sup> holds, that the mythical element in Plato is quite unessential in his philosophy, or, as Teichmüller<sup>3</sup> holds, not believed in at all by Plato himself, this mythical element would still deserve the attention of all students of human thought, both as taking up previous Pythagorean, Orphic, probably Egyptian and perhaps Indian ideas, and as influencing all the Hellenic and Roman world, *i.e.*, what we commonly call the whole world. And, in any case, the mythical form of expression must throw some light on Plato's habitual manner of thinking; for we cannot abstractly separate form and content, expression and thought.

Let us take the three characteristic Platonic 'doctrines' of Recollection, Pre-existence and Transmigration, and endeavour to discover in what sense they are to be understood.

1. The doctrine of Recollection (*ἀνάμνησις*) occurs both in the *Meno* and the *Phaedo*. "Knowing is remembering." This theory seemed to obviate the Sophistic puzzle about the impossibility of learning:—We either learn what we already know or what we don't know: in the first case we don't learn; in the second case, we can't (cp. *Meno*, 80 E). This is just one of those instances where the Aristotelian distinction of potentiality and actuality comes at once to *our* help. We learn what we are capable of knowing; we cannot

<sup>1</sup> Read before the Aristotelian Society on Nov. 30, 1885. Only a few additions have been made, with some alterations in the form.

<sup>2</sup> *Geschichte der Phil.*, ii. 207 ff.

<sup>3</sup> *Studien zur Gesch. der Begriffe* and *Ueber die Unsterblichkeit der Seele*.

learn what is quite alien to us. But the knowledge, which in some form is *there* already, is there only virtually, and requires the effort of what we call learning to become actual, to be realised, to become what we can properly call *knowledge*. Plato in the *Theaetetus* (which in many respects may be called the most 'modern' of all his dialogues, for in it he discusses not the usual ancient question of Being, but the modern question of Knowing) does arrive at this Aristotelian distinction in his recognition of the difference between "possessing" and "having or holding," illustrated by the birds in a cage (*Theaet.*, 197); but it remained for Aristotle to grasp the full significance of this distinction, which has become so much a commonplace of our language and our thought that it requires an effort to see its importance and to understand how the problems of knowledge presented themselves before the time of Aristotle. Now, this is just the philosophic truth of Plato's theory of Recollection: in learning the mind is not filled with something alien to it,—as popular language, now as then, is inclined to assume, and as even some philosophers have been apt to suppose, when they ask how Mind can know Matter, after defining Matter in such a way that it is of its very essence, as the exact antithesis of Mind, that it cannot be known. According to Plato, in learning the soul recovers its own. This is more than a theory of knowledge merely. In the *Phaedrus* it becomes a theory of art and morality as well. The ideal of beauty, the ideal of goodness, is figured as something we have once known and have to regain. And are we not all ready to speak and think in this way? What is the meaning of the phrase 'Natural Rights,' which popular politicians have not yet given up, and which even Mr. Herbert Spencer defends against Bentham and Mr. Matthew Arnold? We have come to form an ideal of society, and we speak as if that were a state from which we had fallen away. We transfer the 'ought to be' to 'once upon a time'—a golden age, 'a past that never was a present'. The same tendency of imagination may be found in the treatment of the term '*a priori*'. *A priori* conceptions, in Kant's use of the term, are those which are necessarily implied or presupposed in knowledge. How often is the Kantian theory of knowledge criticised as if Kant had meant that the infant comes into the world with a ready-made logic! We become explicitly conscious of the necessary conditions of our thinking very late, if at all; but the conditions are *there* implicitly all the same. In the word 'presupposed' there again slips in the suggestion of priority in time.

The doctrine of Recollection has been made most familiar

to us by Wordsworth's Ode. But this, we may well say with J. S. Mill (though I know not whether in his sense), is "falsely called Platonic". Wordsworth makes life a gradual decline: Plato makes it a progress. To Wordsworth it is a forgetting: to Plato a remembering. In Wordsworth the child is nearer heaven than the full-grown man: in Plato the full-grown man, if he has used his time well, has regained much of what he lost by birth.<sup>1</sup> Wordsworth's beautiful fancy owes more to the sentimentalism of Rousseau than to Plato's idealism.

How far was Plato conscious that his doctrine of Recollection was only a *Vorstellung* representing a *Begriff*, an expression in terms of a history in time of what is really a logical development? The theory of Education in the *Republic* seems to supply an answer. It is sometimes said that in the *Republic* Plato applies the theory of ideas at which he was arriving in the *Meno*, but that he has given up the doctrine of Recollection at least as an essential part of his theory of knowledge (though it is alluded to in the 'myth' at the end, 621 A). Now, I shall assume as a canon of interpretation in the case of Plato, as of any other philosopher, that we must start with the supposition that his thinking is coherent, and that we must begin by looking for agreement rather than for disagreement. On the other hand, we cannot put the canon in the form in which Prof. Teichmüller and Mr. Archer-Hind put it—"that any interpretation of Plato which attributes inconsistency to him stands self-condemned".<sup>2</sup> Consistency is a very poor virtue to ascribe to Plato: it would imply that his system sprang ready-made from his head and that it admitted of no growth—a view seriously maintained by Schleiermacher, who regards the order (*i.e.*, the order which he conjecturally prefers) of the dialogues as representing an order adopted for purposes of exposition and not an order of development in the writer's mind. When, therefore, in the *Republic*, we find Education described as "the turning round of the eye of the soul to behold the truth,"<sup>3</sup> it seems reason-

<sup>1</sup> This has been pointed out by Mr. Archer-Hind in his edition of the *Phaedo*, p. 85.

<sup>2</sup> Edition of the *Phaedo*, p. 24. Mr. Archer-Hind cannot mean this to be taken too literally, because he certainly admits a development in Platonic doctrine.

<sup>3</sup> *Rep.* vii., 518 B, C. "Certain professors of education must be mistaken in saying that they can put a knowledge into the soul which was not there before, like sight into blind eyes. . . . Whereas our argument shows that the power (*δύναμις*) is already in the soul; and that as the eye may be imagined unable to turn from darkness to light without the whole body, so too, when the eye of the soul is turned round, the whole soul must be turned round from the world of becoming into that of being, and learn

able to identify this with the theory of Recollection, divested of its mythical setting; but we are not therefore justified in arguing that this mythical setting never had any real significance for Plato himself.

2. If the doctrine of Recollection be merely a figurative way of expressing the logical nature of knowledge, what becomes of the Pre-existence of the Soul about which so much is said, not only in the *Meno*, *Phaedo* and *Phaedrus*, but in the end of the *Republic* itself? The pre-existence of the soul is 'proved' in the *Phaedo*, sooner and more easily than its existence after death; and all the arguments in the *Phaedo*, as well as the argument in the *Phaedrus*, prove existence after death only in such a way that existence before birth is necessarily implied also. This is not the case with the argument in the *Republic*, although the "Vision of Er" introduces pre-existence as much as do the Apocalypses of the *Phaedo* and *Phaedrus*. Mr. Archer-Hind goes so far as to say: "It is in fact impossible to bring forward any sound arguments for the future existence of the soul which do not also involve its previous existence, its everlasting duration. The creational theory is matter of dogmatic assertion, not of philosophical discussion" (p. 19). The idea of pre-existence was rejected by most Christian theologians, because it seemed inconsistent with the creation of the human soul by God. (It was accepted by Origen; but then Origen was not accepted by the Church.) Quite consistently, the idea of a *necessary* immortality of the soul was rejected by most of the early Christian theologians. It is only later theology that has fallen back on the metaphysical doctrine of immortality.

As we have obviously, in the ordinary sense of the term, no recollection of having existed before our birth, it might be argued that, since Plato puts the existence of the soul after death on the same level with its existence before birth, either (1) he did not seriously hold the immortality of the soul at all, or (2) the immortality in which he believed was not what people ordinarily mean, or think they mean, by immortality, since it does not imply consciousness and memory: Plato, it might be said, maintains an *individual* but not a *personal* immortality, *i.e.*, the individual soul remains permanently self-identical, but consciousness and memory pass away at death.<sup>1</sup> It is somewhat strange that Plato should have made

by degrees to endure the sight of being and of the brightest and best of being, or, in other words, of the Good." (Jowett's Translation, according to which most of the other quotations in this paper are given.)

<sup>1</sup> In this sense of the terms Teichmüller (*Unsterblichkeit der Seele*, pp. 147-149) maintains that individual immortality can be apodeictically proved, but that personal immortality cannot be apodeictically proved or

no reference to this very obvious objection, that, if after death we are as little conscious of an identity with our present selves as we are now of any identity with a self before our birth, the immortality of the soul cannot matter to us. As Hume says: "The soul if immortal existed before birth: and if the former existence noways concerned us, neither will the latter" (Essay "On the Immortality of the Soul"). Yet the objection evidently was made in ancient times, because there is an attempted answer in a fragment of Aristotle's lost dialogue *Eudemus*, preserved to us by Proclus: "Aristotle," says Proclus, "tells us the reason why the soul coming hither from the other world forgets what she there has seen, but going hence remembers her experience here. Some who journey from health to sickness forget even their letters, but this happens to no one who passes from sickness to health. Now the life without the body, being the natural life of the soul, is like health, the life in the body like disease. Whence it is that they who come from the other world forget what is there, but they who go thither remember what they experienced here" (Arist., 1480 b. 5, Fr. 35, Edit. Berol.). We cannot say how far Aristotle when he wrote the *Eudemus* may have seriously or half-seriously meant what he said. We cannot certainly decide, whether in his opinions about the soul he passed through an early 'Platonic' stage (as Zeller thinks, *Arist.*, p. 602), or whether he was writing a Platonic dialogue more or less as a literary exercise, or whether the dialogues, being (as Bernays thinks) merely "exoteric discourses," must not be taken as evidence of Aristotle's genuine philosophical views. We know of course from the *De Anima* that Aristotle held no doctrine of either individual or personal immortality. But the passage quoted by Proclus may be taken as representing the answers which would have been made in a Platonic dialogue to an objector. It certainly agrees perfectly with the position of the *Phaedo*, according to which this life is a temporary imprisonment of the soul.

3. The idea of Metempsychosis or Transmigration has been more widely held than any other view about the destiny of the soul, and has even in modern times been regarded as that most capable of philosophical defence. Thus Hume says, in the Essay we have already quoted: "The Metempsychosis is the only system of this kind that Philosophy can hearken to". Hume may be writing ironically, maintaining the doctrine least acceptable to his enemies, the theologians, to be the most plausible. But no such suspicion attaches to disproof. He holds, however, as we shall see, that Plato's idealism prevents him maintaining even individual immortality.

the famous passage in which Lessing at the close of his *Erziehung des Menschengeschlechtes* (§§ 93-100) says: "Why may not each individual man have been more than once present in this world? Is this hypothesis so ridiculous because it is the oldest? . . . . It is well that I forget that I have already been here. The recollection of my previous condition would only let me make a bad use of my present. And what I *must* forget for the present, have I forgotten for ever? . . . . Is not all eternity mine?"

Plato's accounts in his different dialogues are certainly not easy to reconcile with each other even in important points. Thus (a) we may doubt how far, according to Plato, any human soul can ever exist without a body of some sort: perhaps the completely free existence is only an ideal, never quite attained, although approximated to by the philosopher. In the myth in the *Phaedrus* (246 D) even the gods have a body. So in the *Timaeus* the created gods are compounded of body and soul. In the *Laws* however (x. 899 A) the incorporeal existence of the soul (he is speaking especially of the soul of the gods) is put forward as an alternative. Again (b) in the *Timaeus* (41 D, ff.) it is said that the soul is *necessarily* implanted in bodily forms: whereas in the *Phaedrus* (248) the descent into a body is spoken of as resulting from forgetfulness and vice, *i.e.*, as being a punishment for sin. This difficulty may be put aside: it is only one form of the contradiction between the conception of Necessity and Freedom which appears in all human thought, in all philosophies and in all theologies. Man falls by free-will, and yet the fall is regarded as necessary. (c) Zeller (*Plato*, Engl. Transl., p. 410, n. 55) has raised a difficulty about the migration of a human soul into lower animals. "How can man," he asks, "to whose nature the capability of forming concepts, according to *Phaedrus* 249 B, essentially belongs, become a beast?" To this it might quite well be answered, within the limits of the Transmigration-doctrine, that Plato means that because man knows by universals, his soul must once, *i.e.*, when "in heaven," have seen them: a soul which *to begin with* was a beast's, and so only a beast's, could not rise to be a man's. A soul may sink from among the gods to man, and then to beast, and rise again to be with the gods, only because at first it was with the gods. The rest of Zeller's objections may be met in a similar way. Thus, when he asks how can the life of the beast serve to purify the soul, the answer would be found in the conception of expiation by suffering. When the soul came to choose again, it would have been taught the evil of the merely animal life. And even among beasts, as

the Buddhists recognise, there are degrees of moral quality. Again Zeller asks: "Are the souls of the beasts (acc. to *Tim.* 90 E. ff.) all descended from former human souls and so all intelligent and immortal according to their original being, or (*Phaedr.* 249 B) only some of them?" Plato might answer that all souls, which are now souls of beasts, may quite well once have been human. The passage in the *Phaedrus* only implies that, if there were any soul of a beast that had never been human, it could never become human. Thus, though it *may* represent a different view from that of the *Timaeus*, it is not *necessarily* inconsistent with it. But the want of formal consistency in the mythology may be taken as indicating, what Plato himself suggests at the beginning of the *Timaeus* (29 C), that it is not to be taken too literally. We have here only 'probability,' not truth.

The key to the interpretation of Plato's myths seems to be given us in the *Republic* (382 C, D) where, after condemning altogether "the lie in the soul," *i.e.*, ignorance, he allows that "the lie in words" may be used in two cases: (1) as a medicine (*φάρμακον*) against enemies and to deceive men for their own good, as we do with sick persons and madmen; (2) as an approximation to the truth: where it is impossible to express the truth exactly, we may give something which, though false, resembles the truth as far as possible. Teichmüller<sup>1</sup> holds that the myths about the soul belong to the first class, like the myth of the earth-born men (*Rep.* 414 C ff.) which justifies the caste-system. The story of the earth-born men is obviously a dogma to be imposed authoritatively by the legislator on the ignorant classes; but the accounts of the origin and destiny of the soul seem to us to be 'permissible lies' of the second kind, as is suggested by the passage just referred to in the *Timaeus* and in the end of the *Phaedo* itself (114 D): "A man of sense ought not to say, nor will I be too confident, that the description which I have given of the soul and her mansions is exactly true. But I do say that, inasmuch as the soul is shown to be immortal, he may venture to think, not improperly or unworthily, that something of the kind is true. The venture is a glorious one, and he ought to comfort himself with words like these, which is the reason why I lengthen out the tale." There is certainly a passage in the *Laws* (959 A), to which Teichmüller refers, which seems to favour his view. With regard to the burial of the dead it is there written: "Now we must believe the legislator when he tells us that the soul is in all respects

<sup>1</sup> *Studien zur Geschichte der Begriffe*, p. 163.

superior to the body, and that even in life that which makes each one of us to be what we are is only the soul ; and that the body follows us about in the likeness of each of us, and, therefore, when we are dead, the bodies of the dead are rightly said to be our shades or images ; for that the true and immortal being of each one of us, which is called the soul, goes on her way to other Gods, that before them she may give an account—an inspiring hope to the good, but very terrible to the bad, as the laws of our fathers tell us, which also say that not much can be done in the way of helping a man after he is dead. But the living—he should be helped by all his kindred, that while in life he may be the holiest and justest of men, and after death may have no great sins to be punished in the world below." This passage does seem to rest the doctrine about the soul merely on the authority of the legislator. But while Plato holds that for the mass of mankind, who have only 'opinion' or 'belief' on all matters, such authority is sufficient, surely he does not mean us to think that the Socrates of the *Phaedo*, who is dying as a condemned heretic, holds the doctrine of immortality only as something imposed by old tradition. If so, all the lengthy *arguments* would be very much out of place. Though, in the *Laws*, Plato puts the views about the future life as 'a medicinal myth' for the multitude, they may still be 'a myth of approximation' for the philosopher. And in any case, the *Laws* cannot be taken as certain evidence of what Plato held when he wrote the *Phaedo*.

Let us assume, then, that what is said about the life before and after the present life is intended as an approximation to the truth. The difficulty remains to decide where myth ends and where logic begins. Critics have been too apt to suppose that Plato himself could always have drawn the line exactly. Our language and our thinking are conditioned by our ordinary experiences ; and when we have to speak of that which belongs to the insensible, we find ourselves compelled, however much we try to avoid it, to use phraseology belonging properly only to the sensible. We have to talk of the mind, which we know not to be in space, as if it were in space and had parts and divisions ; and we have to apply to what our logic compels us to recognise as independent of time conceptions and images which have strictly no meaning except as applied to what Plato calls "the moving image of Eternity". In illustration one need only refer again to such phrases as '*a priori*', '*presupposed*', to see how we ourselves are obliged to use 'the verbal lie'. Philosophy cannot dispense with metaphor. Only we should try to use our

metaphors with as full a consciousness as possible. It is metaphors which escape notice that are dangerous. Besides being subject to this common necessity of human thought, Plato is essentially a poet; and thus to him the language of myth is natural. His notions clothe themselves readily in sensuous imagery. And we cannot make a sharp distinction between Plato the poet and Plato the philosopher (as Teichmüller tries to do, *Studien*, p. 158). As already said, we cannot separate the form and the content of his thinking.

We can no longer hold, as used often to be held, that there is a fundamental antithesis between Plato and Aristotle. The agreement between them is far more fundamental than the difference. The severe and often captious criticisms of Aristotle must not blind us to the fact that almost every Aristotelian doctrine is to be found implicitly in Plato. As Sir A. Grant admirably said, "Aristotle codified Plato". In that phrase there is an expression at once of the essential agreement in thought and of the obtrusive difference in manner. There is of course a Platonic *system* of philosophy, in the sense in which every great philosopher, every thinker who is more than a mere brilliant *penseur*, has a system; but Plato's manner of working, not merely his manner of writing, is artistic rather than scientific. The difference between Plato and Aristotle is not that Plato is an idealist and Aristotle a realist—Aristotle is as much an idealist as Plato—but that Plato is a religious poet and Aristotle a scientifically trained physician.

Let us recognise, then, as fully as possible, that the philosophic truth of Plato is to be found in Aristotle. But it does not therefore follow that Plato himself would have accepted Aristotle's doctrines as his own. The student of Kant feels that Kant himself did not fully recognise the philosophic significance of many of his own positions. He retained much of the phraseology, and along with it not a little of the way of thinking, of the Leibniz-Wolffian School, and would not have admitted the interpretation given to his doctrines by Fichte and Hegel. So too in Plato there is retained much Pythagorean phraseology belonging to a stage of thought beyond which he had really advanced, and he would certainly not have recognised the Aristotelian developments as his own. I am quite aware that this is a way of treating the history of philosophy which does not commend itself to a great many, especially the English, students of philosophy, but it seems to me the only way in which the history of philosophy—nay, in which any history becomes intelligible at all. Rousseau might not have recognised his own

work in the French revolution ; and yet none the less it was, in certain of its aspects, only an attempt to translate his ideas into facts. Luther might have been horrified at the modern theology and philosophy of Germany ; and yet they are the direct product of his revolt from ecclesiastical authority. No man, not even the greatest and wisest, can fully understand the significance of what he is doing.

Thus, while admitting and insisting that Aristotelianism is 'the truth,' or, in other words, gives the *philosophical* interpretation of Platonism, we must not suppose that Plato himself would have admitted it. We must distinguish between the Platonism of Aristotle and Platonism as it existed for the mind of Plato himself. Hence, however much we feel, with Hegel, that the mythical element, the picture-thinking, is not of the essence of Platonism, we must not go on to say, with Teichmüller, that Plato himself did not hold any of it at all. To say this is to imply that Plato had an exoteric and an esoteric philosophy, and that when he argued for the immortality of the soul he was deliberately deceiving his readers by 'a noble lie,' such as he allows his rulers to use towards the lower classes in the state. But surely such a 'deception' is quite foreign to Plato's spirit. No philosopher does his thinking more openly before the public. Because, as we have shown, the truth of the doctrine of Recollection is to be found in that theory of knowledge which presupposes an identity of Thought and Being, it does not follow that Plato himself did not figure to himself the soul as having existed previously to birth and as recovering again in this life some part of the knowledge it had possessed before. However conscious Plato was that such language, in terms of *time*, was *inadequate* to express the exact truth, the frequent use of such language must be taken as showing a habit of thinking and not merely an artificial mode of expression.

## II.

Let us now consider separately the arguments for immortality in the *Phaedo*. It has been much debated how many they are.<sup>1</sup> They may be conveniently treated as *three* in number, though all really form steps in one great argument.

<sup>1</sup> It may be convenient to state briefly the distribution of the arguments according to Prof. Geddes and Mr. Archer-Hind respectively, their editions being those most likely to be in the hands of the English reader.

*Geddes.*

I. ἀνταρόδοσις (70 C—72 D).  
II. ἀνάμνησις (72 E—76 D).

III. The soul is simple, not composite in nature (78 B—80 E).

*Archer-Hind.*

} I.

} II.

1. There is an old tradition that souls come back from Hades and live again (cp. *Meno*, 81). This Plato explains and vindicates by the doctrine that opposites come from opposites (*οὐκ ἄλλοθεν ἡ ἐκ τῶν ἐναντίων τὰ ἐναντία*). Mr. Archer-Hind (p. 73) says that Plato appeals to the uniformity of nature and has seized on the principle of the conservation of energy, and "has applied to spirit the axiom which previous philosophers laid down for matter". Is not this misleading language? Plato knows nothing of "laws of nature" in the modern scientific sense: it is not a formula with which he works. He does not get the conservation of energy as a "natural law" and read it into "the spiritual world". The conservation of energy, if we can use the phrase at all to express a conception of Plato's, is to him a necessity of thought, a logical law, not a law of nature. *Omnia mutantur, nil interit* and *Ex nihilo nihil fit* were axioms arrived at from the logical impossibility of thinking either an absolute beginning or an absolute ending, not established like what we call laws of nature by a combination of hypothesis and experiment. And these axioms appear in Plato in the form: "If generation were in a straight line only, and there were no compensation (*εἰ μὴ ἀεὶ ἀνταποδιδοῖ*, &c.) or circle in nature, no turn or return of elements into one another, then all things at last would have the same form and pass into the same state, and there would be no more generation of them" (72 A, B). We can easily see that this principle by itself does not prove the immortality of the soul in the sense in which the term is generally understood. It would be accepted by the Democritean atomist and would be more than satisfied by Aristotle's conception of nature attaining immortality in the species, though not in the individual (*De Anim.*, ii. 4). Yet, of course, if from other sources we can get any arguments for the indestructibility of the individual soul, this principle of the movement from life to death and death to life will fit in with them. This argument may perhaps be compared with Fechner's idea—not that the idea is peculiar to Fechner—that as the life (of the embryo) before birth is to the life in the body as it now is, so is this present life to that after death.<sup>1</sup> Yet there is a most noteworthy

*Geddes.*

*Archer-Hind.*

IV. Objection of Simmias, that the soul is a Harmony, refuted (85, 86, 91—95).

Objection of Cebes, that the soul may outlast the body but not be immortal, refuted (86—88).

V. The soul partakes in the idea of life, and therefore cannot perish (100 B—107 B). III.

<sup>1</sup> G. T. Fechner, *On the Life after Death* (Engl. Transl. by Wernekke), ch. i.

and characteristic difference. Plato thinks of birth as an "eclipsing curse": he thinks of the soul as passing through *cycles* of existence. Fechner is thinking of a continuous *development*. The idea of a Cycle conditions all the thinking of Plato, and of Aristotle too, both in regard to the individual and in regard to society. We may indeed say that the conception of continuous progress is absent alike from their *Ethics* and their *Politics*.

This argument from the alternation of opposites is however not allowed to stand alone. It is at once supplemented by the doctrine of Recollection. Mr. Archer-Hind insists that these must be considered as making up together only one argument, *ἀνταπόδοσις* proving the existence of the soul, *ἀνάμνησις* its possession of intelligence (consciousness) apart from the present bodily life. We may note that Plato himself (73 A, *ώστε καὶ ταῦτη ἀθάνατον ἡ ψυχή τι ἔσκειν εἶναι*) seems to treat them as distinct arguments. But the question is not of much importance. In truth all the arguments lead up finally to the argument from the theory of ideas, and this reference to the doctrine of Recollection already brings in that theory. We have previously considered this doctrine of Recollection and seen that it necessarily implies only the presupposition in knowledge of an eternal element, *i.e.*, an element not dependent on temporal conditions: it implies the eternal character of thought, not the continued duration of the individual human person, although Plato himself, at least at some part of his life, may quite well have interpreted it in connexion with an actual belief in continued personal, or at least individual, existence.

2. The next argument is, that the soul being simple and not composite is indissoluble: it cannot perish by being decomposed. It may be supposed that this is the same argument which has been largely used since Plato's time and which is criticised by Kant<sup>1</sup>—*viz.*, that the soul is permanent because it is a simple substance. But the conception of the soul as 'substance' is an addition to Plato's view which we do not find in Plato himself.<sup>2</sup> If we are to compare this position of Plato's with any modern position, we might rather compare it with a view such as results from Kant's

<sup>1</sup> *Crit. of Pure Reason*, 'Transcend. Dial.', book ii., "Refutation of the Argument of Mendelssohn for the Substantiality or Permanence of the Soul".

<sup>2</sup> It might indeed seem to receive countenance from the words in 92 D, *ώσπερ αὐτῆς ἔστω ἡ οὐσία ἔχοντα τὴν ἐπωνυμίαν τὴν τοῦ ὁ ἔστω*, which appear to make absolute existence the substance of the soul. But if the words mean this, they stand in contradiction to all that is said elsewhere in Plato. And Schanz is probably justified in altering *αὐτῆς*, of the MSS., into *αὐτή*.

criticism, *viz.*, that the soul is the unity of self-consciousness. But in truth the conception of self-conscious subject is equally absent from Plato's psychology with the conception of thinking substance. Rather we should regard Plato as having taken the Pythagorean mathematical conception of Unity to explain the soul, using the Pythagorean conception as suggestion and starting-point for his theory of ideas. The soul which is invisible, he argues, is akin to ( $\sigmaυγγενής$ ) the unchanging and incomposite, the invisible world of ideas, not the changing and manifold world of sense. Thus the soul is likely to be at least more permanent than the body and nearly or altogether indissoluble.

There may be good ground for holding that the view of the soul as a substance conjoined with the body is very much due to the language of Plato's *Phaedo*, as ordinarily understood and popularised through the medium of Stoicism, which tended more and more to assimilate or adopt Platonic phraseology. It is a view which gained currency especially among materialistic Christians like Tertullian, who regarded soul and body as two substances or *things*, both material, though the soul might be of finer matter, which could be joined together and separated, externally and as it were mechanically<sup>1</sup>—a view which has naturally led to the question, *Where* is the soul? But Plato must not be made responsible for the crude dogmatism of unphilosophical writers who have been influenced directly or indirectly by his words. As we have seen, the soul's permanence of existence is not by him made absolute (as in the metaphysical-substance-theory which Kant attacked) but is dependent on its affinity to the ideas, to the divine. This being so, as already suggested, it would be less erroneous to say that he thinks of the soul's existence as a necessary condition of knowledge, though he rather puts it in the reverse way. Indeed he sometimes speaks as if the philosopher, the man who knows, who reflects and lives in the true world of ideas, had a better chance of life apart from the body than the ordinary man whose soul is sunk amid the sensible and changing (*Phaedo*, 80 E-81 E). The true life of knowledge is not dependent upon material things, and the soul which lives this true life can therefore exist independently of the body.

Teichmüller (in his book *Ueber die Unsterblichkeit der Seele*) applies to every theory about the soul what in appearance is

<sup>1</sup> Aristotle, *De An.* i., 3 fin., objects to the Pythagorean "tales" of transmigration, that they make *any* soul fit *any* body. But the "tales" as Plato gives them always insist at least on some connexion in character between the soul and body.

a very simple question : "Is the soul according to this view a substance or is it not ? If it is not a substance, it is illogical to hold any doctrine of immortality. The Materialist makes soul a mere function of body ; the Idealist regards it only as the subject of knowledge, and holds the eternity of thought but cannot hold the immortality of the soul." Let us ask what is meant by calling the soul a substance ? *Substance* in its simplest meaning is nothing more than *that which has qualities, the permanent subject of which we can predicate attributes*. But probably most persons who use the word substance about the soul only mean by it *reality*. Primitive man did not regard soul as substance. Rather the body was thought of as the *real* self or person, the soul, spirit or ghost being only a sort of shadow or emanation given off by him. Because the dead and absent appeared in dreams, the appearance was supposed to be some emanation from the person. The ghost had a less real existence than the man while living ; and there were ghosts or souls of other animals and even of things. We have good examples of this primitive 'Animism' in the Homeric poems. The slain warriors *themselves* are a prey to dogs and birds, while their spirits are sent to Hades.<sup>1</sup> With Plato this is completely changed. Socrates is asked how they shall bury him. "You cannot bury *me*. Only my body will remain. I shall go away" (*Phaedo*, 115). The spirits whom Odysseus visits have a very feeble and shadowy existence, not, as Plato puts it, a more real and true existence than men living on earth, so that the life of the wise man becomes "a practising of death" (*Phaedo*, 64 A). This Animism of course still survives in the co-existence of a belief that the ghosts of the dead flit about near graves and their old haunts (cp. *Phaedo*, 81 C, D ; *Laws*, 865 D), along with the idea that their souls are in another world. The differentiation of the words 'soul' and 'ghost' (*ψυχῶν σκιοειδῆ φαντάσματα* in *Phaedo*, 81 D) helps to keep two distinct views alongside of one another. The Christian psychology, which distinguished 'spirit' (*πνεῦμα*) from 'soul' (*ψυχή*), was in the hands of the more philosophical writers parallel to the Greek distinction between 'reason' (*νοῦς*) and

<sup>1</sup> *Pl. i. 3, 4* : πολλᾶς δ' ἱφθίμους ψυχὰς Ἀΐδη προίαφεν  
ἡρώων, αὐτοὺς δὲ ἐλώρια τεῦχε κύνεσσιν  
οἰωνοῖσι τε πᾶσι.

xvi. 856, xxii. 362 :

ὅς ἄρα μιν εἰπόντα τέλος θανάτου καλνψε.  
ψυχὴ δ' ἐκ ῥεθέων πταμένη Ἀΐδούδε βεβήκει  
ον πότμον γοώσα, λιπούσ', ἀδροτῆτα καὶ ἡβην,  
τὸ δὲ καὶ τεθνειώτα προσηγόρια δίος Ἀχιλλεύς.

'soul'; the adoption of 'spirit' rather than 'reason' for the highest element in the soul indicating the abandonment of Greek intellectualism and the preference of the ethical and emotional to the intellectual. But the Christian psychology allowed the old Animism to spring up again, and our word 'spirit' hovers between the meanings of the German '*Geist*' and the English 'ghost'.

Plato, then, does think of the soul as being that which is most real and permanent in a man, but he does not express this by making the soul a 'substance'. The category of substance, being applicable properly only to what we perceive in time and space, is an inadequate conception for soul, as Kant showed in fact, though he writes as if it were in a way a misfortune that we could not prove the soul to be a substance in relation to its experiences in the same sense in which in a physical body we distinguish the substance from the properties.<sup>1</sup> Self-conscious subject is a higher and better conception for soul; and if the soul is called a substance, it can only be this that is meant. Lotze applies the term 'substance' to the soul, but explains himself as only meaning by substance "everything which possesses the power of producing and experiencing effects, in so far as it possesses that power". Again he says: "The fact of the unity of consciousness is *eo ipso* at once the fact of the existence of a substance" (*Metaphysic*, pp. 426, 427, Engl. Transl.). Thus Lotze does not maintain that the soul is a substance, in the sense in which Kant denies that we can know it to be a substance, and according to which alone Teichmüller seems to think the soul's immortality can be logically held, but only in a sense with which there is nothing in Plato to conflict. Plato, as we have already said, has not this conception of self-consciousness to work with; but he considers the essential element in the soul to be its *knowing* rather than its merely existing. And so (if we are to yield to the inevitable temptation of interpreting him in terms of modern controversies) if he is not yet Kantian, he is at least free from the metaphysical assumption against whose validity Kant argued.

The argument which Socrates directs against the objection of Simmias that the soul is the Harmony of the body, and as such cannot outlast the destruction of the body, has been

<sup>1</sup> Kant argued that identity of self-consciousness need not imply identity of substance. Thus the same movement is transmitted through a series of elastic balls; the substances change, the movement is the same. And so conceivably the self-same consciousness might be transmitted through a series of substances. (Note on "Third Paralogism of Transcendental Psychology" in *first edition*.)

sometimes treated as a separate argument for the immortality of the soul (*e.g.*, by Ueberweg and Prof. Geddes).<sup>1</sup> This Mr. Archer-Hind denies; rightly, if we consider only the formal nature of the argument. But it contains the assertion of the priority and independence of the soul, and thus does really advance the general argument of the dialogue. (1) The doctrine of harmony is shown to be inconsistent with the already accepted doctrine of Recollection (91 C-92 D). A harmony can only come into existence after that which produced it. (2) A harmony is dependent upon the materials that produce it, and is more or less of a harmony according to their condition; whereas the soul as such (*i.e.*, in its ultimate essence, as we might say the mere I which is the condition of any knowledge) does not admit of degrees. The virtuous soul is not more a soul than the vicious, though it may be called more of a harmony (92 E-94 B). (3) The soul rules the body, whereas a harmony, as before said, is dependent on its materials (94 B-95 A). The harmony-theory is also criticised by Aristotle, in the *De Anima*, i. 4, who, like Plato, speaks of it as widely held. It is impossible for us to find out with whom the theory originated. It may, to begin with, have been nothing more than a poetical image popularly accepted. Plato's main argument against it is the first one—that it is inconsistent with the theory which alone explains knowledge. On this position the other two depend.

J. S. Mill (*Essays on Religion*, p. 197) considers this argument of Simmias to be that which a modern objector would naturally make to Plato's argument, *viz.*, "that thought and consciousness, though mentally distinguishable from the body, may not be a substance separable from it, but a result of it, standing in a relation to it like that of a tune to the musical instrument on which it is played".<sup>2</sup> We may compare Voltaire's question whether the song of the nightingale can live when the bird has been devoured by an eagle. It should be noticed that *áppovía* means properly a *succession* of notes, and so is equivalent to our word 'tune' or 'air,' rather than to 'harmony'. This being so, does not the illustration of the lyre tell the other way? A tune certainly cannot exist apart from the notes of which it is composed. They

<sup>1</sup> Cp. Teichmüller (*Studien zur Geschichte der Begriffe*, p. 118), who puts the argument in the form: The ideal principle is prior to the becoming and not a product of it.

<sup>2</sup> Mr. J. M. Rigg in MIND 41, p. 89, says: "The modern analogue of the harmonic theory is the attempt made by biologists to identify the soul with a special form of that correspondence between organism and environment in which life is held to consist".

are, in Aristotelian phrase, the matter of which it is the form. But the same tune, *i.e.*, the same combination of notes may be played on many instruments; and so the analogy would not prove the mortality of the soul, unless the soul be, as in Aristotle's view, the form or realisation of the body. If the body be analogous to the notes of the tune, the soul perishes with the body; if the body be analogous to the musical instrument, it need not. It may seem strange that Plato should not have noticed this way of turning aside the objection. Perhaps the whole harmony-theory seemed to him to deny too much the essential unity of the soul.

3. We can now pass to the third great argument, to which all the others lead up, that which makes the question of the soul's immortality expressly and directly depend on the doctrine of Ideas. It is impossible here to go through the complicated and difficult details of the argument. The difficulties are partly matters of interpretation of language and must be left to the philologer; partly they depend on the whole problem raised by the different forms in which the theory of ideas appears in Plato. We are at a loss to know how far we may take as a guide the presentation of the theory in other dialogues.<sup>1</sup> The main argument in its briefest form is this: The soul partaking in, or manifesting in itself, the idea of life cannot partake in the opposite idea, that of death, just as fire which partakes in the idea of heat cannot admit the idea of cold, and as the abstract number three, which is odd, cannot admit the idea of even. Cold fire, even three, dead soul would imply cold heat, even odd, dead life, and so involve a contradiction in terms.

What, according to Plato, is the relation of the soul to the ideas? Teichmüller argues that, because the soul is not an idea, and because in Plato's system only the ideas really exist, therefore soul does not exist. That the particular soul does not exist in the same way as the ideas we may agree. But (1) it may be doubted whether Plato and his critic are using 'existence' (being) in the same sense. As Lotze has very well pointed out (*Logic*, Eng. Tr., p. 440), when Plato speaks of the ideas as *τὰ ὄντας ὄντα* he really means that they are alone *valid*, not that they are existent things; but the

<sup>1</sup> The questions of interpretation will be found most carefully discussed in Mr. Archer-Hind's edition. May I here, once for all, acknowledge the obligation under which every student of Plato must stand to him? The points of disagreement in this paper must be taken as presupposing this obligation. The latest important contribution to the study of the ideal theory has been made by another Cambridge Scholar, Mr. H. Jackson, in the *Journal of Philology*, vols. x.-xiii.

Greek language does not admit of a distinction between validity and being.<sup>1</sup> Plato's ideas are not to be thought of as equivalent to Leibniz's monads, though Leibniz himself strangely thought so (*Epist. ad Hanschium*, 1707, Ed. Erdmann, p. 445). Rather they are the equivalent in Plato to what we call laws of nature. The Idea of the Good is in Plato's system 'God'; and Leibniz makes God the monad of monads. But is not this just the final inconsistency in Leibniz's system? If we are to explain a universe of monads, God must be the totality and unity of the relations between the monads; but this is a reconciliation which Leibniz did not adopt. (2) The soul has not indeed the same absolute significance or value that the ideas have, but it has a significance or value which the composite man or animal has not. It is, as has already been argued, 'nearer to' or 'more akin to' the ideas, because it is what knows and so is ultimately of the same nature with what is known, *i.e.*, the ideas. The identity of the knowing and the known is thus the logical truth at the bottom of the ideal theory, as we have already seen in the special case of the doctrine of Recollection.

The soul not being an idea, may we say that there is an idea of the soul? We talk of souls as we talk of other classes or kinds of existences; so that, according to the view of the ideal theory which we have in the *Republic*, there ought to be an idea of the soul. Plato certainly never uses the phrase. But Mr. Archer-Hind thinks it necessary in the argument in the *Phaedo* to assume this "metaphysical monstrosity" as he calls it. "We have," he says, "the following terms; (1) the idea of life, (2) the idea of soul, which carries the idea of life to particular souls, (3) the particular soul, which vivifies the body, (4) the body in which is displayed this vivifying power." In the argument soul is treated of as parallel to the triad (the abstract three), and Plato does use the phrase *ἡ τῶν τριῶν ἴδεα* (104 D); so that there would seem no escape from this conclusion. But surely, if we are to argue from the view of the theory of ideas in the *Republic*, Plato does not place the abstract conceptions of mathematics on the same level with the ideas, but in an intermediate region between the particular things of sense and the ideal world. The Pythagorean doctrine of numbers served Plato as suggestion and starting-point for his theory of ideas; and the relation of abstract numbers to concrete numbered things

<sup>1</sup> When Aristotle says: ὁ πᾶσι δοκεῖ τοῦτον εἶναι φαμεν (Eth. Nic. x. 2, § 4) he means that universal opinion has *worth* or *validity*, that there is in it (an element of) rationality, as in the parallel passage in Eth. Nic. vii. 13, § 6, πάντα φύσει ἔχει τι θεῖον.

serves as an illustration of the relation of ideas to things (cp. Arist., *Met.* i. 6). Might we suggest, therefore, that "the idea of three" is here not to be taken too literally? In any case the number 'three' is not an idea in the same sense or of the same dignity as the quality 'odd': and similarly soul belongs to a region intermediate between the idea (of life—the living) and the concrete living animal. We might then compare the position assigned to the world-soul in the *Timaeus* as "the mediating principle between the Idea and the Phenomenon, the first form of the existence of the idea in multiplicity" (Zeller). Nothing is said about the world-soul in the *Phaedo*, but we are justified in expecting that Plato, even if the *Timaeus* represents a different stage of his thinking, should treat it analogously to the human soul.

The chief difficulty which meets us in Plato's theory of ideas is the relation of the ideas to one another. We feel that they ought to be all organically connected with one another and with the idea of the Good. But the science of dialectic which should do this exists for him only as a possible science, as an ideal. We are puzzled by his recognising idea of qualities, of concrete things in nature, of works of art all separately just as occasion requires; and we do not know exactly how the idea of 'the just' for instance stands related to the idea of 'man' or the idea of 'table' (I am referring only to the forms in which the theory appears within the limits of the *Republic*). Some of these we feel are more properly 'ideas' than others. This difficulty is partly due, doubtless, to the tentative and 'sceptical' character of Plato's philosophy; partly perhaps to the influence of the undogmatic and vague character of popular Greek polytheism. The relation of the various gods to one another and to the supreme god is left undetermined. Plato and Aristotle themselves talk indifferently of *τὸ θεῖον*, *ὁ θεός*, *οἱ θεοί*. Plato is anxious to prove that God is good and the author of good only (*Rep.* ii.): it seems to be a matter of indifference to him whether God is one or many. The *Timaeus* does indeed suggest a hierarchy of divine beings; but then the *Timaeus* stands by itself in its Pythagorean dogmatism. The result of the whole discussion in the *Phaedo* then amounts to this: that the particular concrete man (composed of body and soul) passes, as we saw, from life to death and death to life (cp. 70 C, 103 A-C); the soul which makes him live is always living. It cannot admit death, and is therefore indestructible. This result may indeed appear to be a purely verbal statement: "Anima est animans"; but its signifi-

cance comes from the connexion established between the soul and the ideas.

Neither in the *Phaedrus* nor in the *Republic* do the arguments used for immortality turn on the theory of ideas. The argument in the *Phaedrus*, which is put forward as the prominent argument by Cicero (in his *Tusc. Disp.*, i. 23.—also translated by him in *Rep.*, vi. 25), may however be connected with the concluding argument of the *Phaedo*. “The soul is immortal because it is self-moving” (*Phaedr.*, 245 C) may be considered as only one form of stating the argument from the idea of life. If we look for a modern parallel, we may perhaps find it in the argument from freedom (criticised by Lotze, *Met.*, Engl. Transl., p. 420)—an argument which of itself will not prove a personal or even an individual immortality. Only ‘Thought’ is free, and even Thought in its use by us is conditioned by material phenomena.

The argument in *Republic*, x.<sup>1</sup> is that nothing can be destroyed except by its own proper evil. The body is destroyed by its proper evil, disease. The evil of the soul is wickedness; but men do not die simply by being wicked, else wickedness would be a less terrible thing than it is, and there would be no need of the executioner. Thus the soul, not being destroyed by its own evil, cannot be destroyed at all. The argument is so far the converse of the argument in the *Phaedo*. There it is argued that the soul, because not admitting death, is indestructible: here that the soul, because not in fact destroyed, does not admit of death. By itself it seems a very feeble argument. It would only prove that in this life the soul is not destroyed; and though it might suggest a future life, it would not prove immortality, because the destruction of the soul by wickedness might go on after death. Indeed from the position in *Rep.* i., that evil is a principle of weakness and dissolution, it might be argued that evil must in course of time destroy the soul. It has been ingeniously suggested by a friend of mine that it might be retorted to Plato that if sin does not destroy the soul, sin cannot be the evil of the soul but must be proper and natural to it. On the other hand, we find a German writer, Julius Müller (quoted by Prof. Geddes, p. 26), using a parallel argument to Plato’s: “So indestructible is the Personal Individual, that it is able to place itself through that which

<sup>1</sup> Teichmüller (pp. 121, 127) considers *Rep.* 611 C and 612 an argument: “The ideal principle is divine”; also *Rep.* 611 A-C: “The becoming remains always identical in quantity”. Surely these are not “Beweise”?

is wicked in the most enduring contradiction with itself, without at the same time compromising its existence. That the human creature can surrender itself to that which is wicked with full determination, without annihilating itself, is in fact one of the most powerful and tremendous witnesses for the Indestructibility of Personal Existence." But here we see that a conception of the self-conscious Person is assumed before the argument from wickedness is applied; and so it might be said for Plato that, as he assumes the necessary connexion between the soul and the eternal ideas, the fact that its own evil does not destroy the soul is a confirmation of its immortality. Yet it is striking and characteristic of his way of working that the arguments in the *Phaedrus*, *Phaedo* and *Republic*, which we may fairly suppose all to belong to the same general stage of his philosophy, are stated in complete independence of one another.

The special interest of the *Republic* in connexion with our question is that here Plato comes most distinctly face to face with the ethical significance of the conception of immortality; and it is therefore perhaps fitting that the argument should be rather ethical than metaphysical. Plato does not use at all the ethical argument as we have it in Kant, an argument which is so far the converse of Plato's argument from Recollection. Plato's argument might become: We have ideals by which we judge the imperfections of our present life; therefore we must have known them in a previous state. Kant's argument may be put in the form: We have ideals which we cannot realise in this present life; therefore we must exist in a future state. And it is to be observed that Plato's argument turns on the character of *knowledge* even in moral matters, Kant's on the nature of *conduct*.

In the early part of the *Republic* Plato is compelled to protest against the demoralising effect of popular and Orphic ideas about a future life, and appears therefore to reject altogether the ordinary beliefs about rewards and punishments in another world. But having shown that justice in itself, irrespective of consequences in this world or the next, is better than injustice, he now feels able to restore the element of truth, which he recognises in these old traditions, in a way which, so far from being demoralising, shall be morally educative. It would be misunderstanding him however to suppose that either here or in the *Phaedo* he considers the moral value of the doctrine an argument for its truth. Plato is perfectly true to the Greek faith in Reason: having established the truth of the doctrine, as he thinks, independently, on intellectual grounds, he is ready to accept its moral value.

Thus the visions of a future life at the end of the *Republic* and of the *Phaedo* lead to the practical lesson of the immense importance of knowledge and conduct in this. Life is thus regarded, not as a time of probation to determine once for all the eternal destiny of man, but as a time of education to prepare him for the life or lives to come—an idea which has nowhere been so forcibly impressed in modern times as in some of Browning's poems (e.g., "Apparent Failure," "Evelyn Hope," "Christina": not so distinctly in the argumentative "La Saisiaz," where the conception of probation is made use of, though not in the ordinary dogmatic way).

### III.

In what sense does Plato hold immortality? What part of the soul is immortal? To these questions it is not easy to find a consistent or uniform answer in Plato's dialogues. In the *Phaedrus* the soul is imaged as a charioteer driving two horses. This image we may fairly interpret in accordance with the psychology of the *Republic* as representing the three elements of Reason, Spirit (*τὸ θυμοειδές*) and Desire. All these elements, then, are in the *Phaedrus* spoken of as belonging to the immortal soul and as existing apart from the body.

In the *Timaeus* the different parts of the soul are localised in different parts of the body. In the *Republic* (ix. 588) we have the soul described as a complex creature—man, lion, hydra, all enclosed in the form of a man. [Can this be taken as a recognition that the Reason or highest element is the true self?—as Aristotle says: *δόξειεν ἀν τὸ νοοῦν ἔκαστος εἶναι* (*Eth. Nic.* ix. 4, § 4)—or does it only mean that every individual man, apparently one, is really complex?] In *Rep.* 611 C, D, the true and immortal soul is said to be ordinarily crusted over and concealed by impurities. And so in the *Phaedo* the soul of the philosopher is spoken of as free from passion and desire. Again, Plato seems to waver between the view of the *Phaedrus* and *Republic*, that the soul of the good man is that in which the lower elements are under control, and the more ascetic view of the *Phaedo*, that the good man is free from passions and desires altogether. Of course it is obvious that all turns on what is meant by desire. Plato often tends to regard desire as an altogether irrational element, though he sometimes sees that Reason in order to act necessarily implies desire (or at least the element of *θυμός* or impulse). In the *Phaedo* the desires are indeed distinctly ascribed to the body, whereas in the *Philebus* (35 C)

they are ascribed to the soul. These apparent inconsistencies arise very much from our tending to understand Plato too literally when he speaks of parts of the soul. Indeed it should be noted that he more often says *εἴδη* or *γένη* ('forms' or 'kinds,' 'aspects' as we might say) than *μέρη*. We may reconcile all these passages more or less as follows:—The soul in its essence is Reason (*νοῦς*). By admixture with the body it shows itself in the forms of passion and desire, which we may therefore ascribe to the soul or the body according as we are thinking of the soul embodied or distinct from the body. When the soul in a future life is spoken of as being punished, it must be the soul as having desires. The soul escapes, *i.e.*, does not need punishment, just in so far as it is free from desire (appetite, *ἐπιθυμία*). Only the soul of the tyrant which is altogether given over to desire is punished for ever. (This is a characteristically Hellenic touch, and need not be rejected as by Mr. Archer-Hind. It is not more fanciful than any other part of the myths in the *Gorgias* and *Republic*. The tyrant is Plato's ideally bad man opposed to the ideally good man, the philosopher.)

If then it is asked whether Plato thinks bodily existence necessary for the particular human soul, we can only answer by distinguishing the meanings of the words 'body' and 'soul'. If by body be meant, as is ordinarily meant, our body as it exists now, then Plato does hold that the soul can exist apart from the body. If by soul be meant the soul as we know it with its passions and desires, then evidently some sort of body must be supposed for it, else there would be no passions and desires. If we ask whether Plato believes in a personal immortality, we should need to ask ourselves farther what we mean by personality; and we should note that it is not a conception which has become at all prominent in ancient ethics. We might perhaps expect that a consistent Platonist would have held that, just in so far as the soul becomes purified from passion and desire, it loses its materiality, its element of otherness (*θάτερον*), and thus becomes re-united to its divine source. This is an interpretation which the mythical element in Plato might suggest. Yet Plato himself argues (in *Rep.* x. 611 A) that the number of the souls remains always the same; and the greatest of the Neo-Platonists, Plotinus, holds explicitly that there exists a real plurality of souls, the highest being the soul of the world, of which the others are not mere parts. Was this a position retained out of respect for the authority of the divine Plato, or was it rather from an intuition that the Universal apart from individual manifestation is a logical abstraction?

Personality, however, is something more than mere individual existence. The person in the ethical sense, the subject of rights and duties, must be the member of an organised society. And it might be argued that it is only in so far as any one ceases to be a mere individual, that he becomes in the true sense a person, only in so far as he identifies himself with something wider and higher than self. In his theory of ethics, as expounded in the *Republic*, Plato sees this fully. It is not because he makes his citizens merge their lives in the life of the community that his ethics is inadequate, but because his conception of the community is too abstract and too much limited by the prepossessions of aristocratic Hellenism. In his visions of another world, so far from his neglecting the value of the individual, it might even be contended that he exaggerates the significance of the mere individual existence so much in his doctrine of metempsychosis as to neglect the greater ethical significance of the person, which, as just said, depends on a conception of society. He speaks indeed of the good man in the evil state as being the citizen of a heavenly city; but, in his accounts of the life free from the trammels of the body, there is no hint of perfected community. His ideal in the *Phaedo*, and even in the *Republic*, is only an ideal for the philosophic few that escape from among the multitude who are "unworthy of education". May we not say, though it may sound paradoxical, that Plato has no adequate conception of personality just because his conception of the soul is too individualistic?

And yet individualism is not a fair charge to bring against Plato's doctrine of the soul. As we have seen, the soul is not conceived of by him as a self-subsistent monad or atom. The soul is dependent for its life and its immortality on the eternal ideas, ultimately therefore on the Idea of the Good. So that, as Prof. Jowett has said (*Plato*, vol. i. 420), his ultimate argument is equivalent to this: "If God exists, then the soul exists after death". That is, Plato himself, like most of the older Christian theologians,<sup>1</sup> and unlike many who have supposed themselves Platonists, did not hold that the soul *per se* was immortal, but only because and in so far as it partakes in the divine nature and has the divine nature manifested in it. Immortality to him also was a hope ( $\eta \ \ddot{\epsilon}\lambda\pi\iota\varsigma \ \mu\epsilon\gamma\acute{a}\lambda\eta$ , *Phaedo* 114 C), not a dogma.

<sup>1</sup> I have advisedly not complicated this statement by any reference to the dogma of the resurrection, which, from the point of view of philosophy, may be regarded as the assertion of the continued existence of human personality *plus* the assertion that such personality will be connected with an organism of some sort—analogous to the present body according to popular belief, altogether different from it according to St. Paul (*I. Cor.* xv. 35-50).

## IV.—RESEARCH.

### THE TIME TAKEN UP BY CEREBRAL OPERATIONS.<sup>1</sup>

By JAMES McKEEN CATTELL, Ph. D.,

*Assistant in the Psychological Laboratory, University of Leipsic.*

#### III. *The Perception-Time.*

We have found the simple reaction-time on daylight for B and C to be about 150 $\tau$ , and I have given my reasons for assuming that a perception-time is not included in this interval. The perception-time can be defined as the interval between sensation and perception (or between indefinite and definite perception, apperception), that is, the time passing after the impression has reached consciousness before it is distinguished. The impression is perhaps in the back-ground of consciousness when it reaches the optic thalami; before it is in the centre of consciousness it must probably travel to the cortex of the cerebrum and excite there changes corresponding to its nature. The method used by Wundt<sup>2</sup> to determine this time is to let the subject react as quickly as possible in one series of experiments, and in a second series not to react until he has distinguished the impression, the difference of the times in the two series giving the perception-time for the impression. I have not been able myself to get results by this method; I apparently either distinguished the impression and made the motion simultaneously, or if I tried to avoid this by waiting until I had formed a distinct impression before I began to make the motion, I added to the simple reaction, not only a perception, but also a volition. The method for determining the perception-time suggested by Donders<sup>3</sup> and since used by a number of others, is to let the motion depend on the nature of the stimulus. It has been thought by Donders, v. Kries and Auerbach and others, that if the subject reacts on one of two impressions and makes no motion when the other occurs, only a perception has been added to the simple reaction. This is however not the case, it being necessary after the impression has been distinguished to decide between making a motion and not making it. This question, which has been much discussed, becomes quite simple if we consider the cerebral operations that probably take place. I assume that the changes do not penetrate into the cortex at all when a simple reaction is made.

<sup>1</sup> Continued from MIND 42, pp. 220-42.

<sup>2</sup> *Physiol. Psych.*, ii., 247 ff. ; *Phil. Studien*, i., 25 ff.

<sup>3</sup> De Jaager, *De physiologische Tijd Bij psychische Processen*, Utrecht, 1865 ; Donders, *Archiv f. Anat. u. Physiol.*, 1868.

When, however, lights of two different colours (say red and blue) are used, and the subject may only lift his hand if the light is blue, the motor impulse cannot be sent to the hand until the subject knows that the light is blue. The nervous impulse must therefore probably travel from the thalami to the cortex and excite changes there, causing in consciousness the sensation or perception of a blue light; this gives a perception-time. In the cortex after the light has been distinguished a nervous impulse must be prepared and sent to the motor centre discharging a motor impulse there held in readiness; this gives a will-time. I do not think it is possible to add a perception to the reaction without also adding a will-act. We can however change the nature of the perception without altering the will-time, and thus investigate with considerable thoroughness the length of the perception-time.

The object most quickly perceived through the sense of sight is a simple light. In order to investigate the time required I took two cards, one entirely black, the other having on the black a white surface. One of the cards, the observer not knowing which, was placed by the experimenter in the springs of the gravity-chronometer, and the clockwork of the chronoscope was set in motion. The observer fixated the grey spot on the screen immediately before the centre of the white surface (supposing this card to be there), and with his left hand broke an electric current and let the screen fall. The card appeared at the point fixated, and at this same instant the current controlling the chronoscope was closed. The observer either saw nothing, or at the point fixated a white surface. If the light appeared he lifted his hand as quickly as possible, if there was no light he did not let go the key, and the hands of the chronoscope ran on until the clockwork was stopped by the experimenter. Twenty-six experiments were made in a series, the white light occurring thirteen times. Determinations were only made when the light occurred, so the averages in this section are from thirteen reactions (in the corrected series from ten). It will be seen that, as the observer tries to make the reaction as quickly as possible, he may lift his hand when the light is not present. If this happens often the times measured are not correct, but too short, since we may assume that the observer lifts his hand as often when the white light is present before he has seen it, as he makes the motion when no light comes. We must however expect such a false reaction occasionally to occur, otherwise we might assume that the reaction is not made in the minimum time when the light is present. In these experiments such false reactions scarcely happened except when the observer was disturbed, or when the impressions to be distinguished were similar (E from F, for example). In the first case the average is not seriously affected, as the reactions are as apt to be unduly retarded as unduly hurried. In the second case false reactions lead us to suppose that some of the reactions on the stimulus are too short. The method I have introduced of giving

a corrected average eliminates all premature reactions. I give in the Tables the number of false reactions made;<sup>1</sup> it would have been well if v. Kries and Auerbach, Merkel and others had done the same.

We can now examine the Table giving the time needed to perceive and react on a white surface.

TABLE XII.

	B				C			
	R	V	R'	V'	R	V	R'	V'
14. I.....	203	8	203	6	239	14	246	7
19 .....	217	18	213	12	219	13	217	10
20 .....	222	22	222	15	226	13	226	9
31 .....	234	35	217	11	238	13	241	10
2. II.....	219	21	214	13	215	16	217	11
	214	30	206	18	216	12	219	7
3 .....	207	20	203	7	256	20	254	10
25. III.....	239	28	234	21	250	19	253	15
	212	19	205	6	263	22	259	9
31 .....	215	34	205	15	244	16	248	9
	189	13	186	6	245	10	242	7
	191	16	189	7	251	11	252	5
	183	12	185	8	246	17	242	12
2. VII.....	213	13	212	7	262	7	262	4
4 .....	209	13	210	8	251	11	251	6
A.....	211	20	207	11	241	14	242	9

The simple reaction-time for B and C is about  $150\sigma$ , therefore (on our hypothesis as to the nature of the cerebral operations, and assuming, though not without hesitation, that the corresponding physiological processes take up the same time as in the simple reaction) the time needed for the nervous impulse to travel from the thalamus to the centre for sight in the cortex and excite the cells there so as to call forth the sensation of a light, and for a will-impulse to be prepared there and sent thence to the motor centre, was for B  $61$ , for C  $95\sigma$ . We may suppose that the time of the centripetal and centrifugal progress through the brain is about the same, and that the time used in the cortex is about equally divided between the perception of the light and the preparation of the motor impulse; at all events the whole time is so short that, if we divide it equally between the processes of perception and volition, the error cannot be great. We therefore set the perception-time for light, where the nature of the light need

<sup>1</sup> After "false," the entire number made during the series given in the column under which it stands.

not be distinguished, at  $30\sigma$  for B, 50 for C, and the will-time in these and similar experiments at the same.

The reaction was made with the speech-organs in quite the same manner. When the white surface was seen the observer said 'Weiss' and the hands of the chronoscope were stopped by means of the lip-key or sound-key. When no white surface was present the observer said nothing, and the hands ran on until the experimenter stopped the clockwork.

TABLE XIII.

	SOUND-KEY.				LIP-KEY.			
	B		C		B		C	
	R	R'	R	R'	R	R'	R	R'
3. IV.....	246	241	282	281	236	241	276	275
4.....	255	247	302	308	241	246	281	276
5.....	234	237	274	268	233	235	256	250
7.....	247	244	264	264	243	248	263	263
	248	246	274	268	244	245	256	256
A.....	246	243	279	278	239	243	266	264
AV.....	20	11	18	12	14	9	18	12

We have seen that the motor-time is longer when a simple reaction is made with the speech-organs than when it is made with the hand. There is no reason why the perception and will-time found by subtracting the simple reaction-time (Table III.) from the time here measured should not be the same as when the reaction was made with the hand. If we average together the determinations with the sound-key and lip-key we get  $65\sigma$  for B, 100 for C, which agrees very well with the determinations made with the hand.

If instead of two black cards on one of which there is a white surface, we take two white cards on one of which there is a black surface, and let the observer react only when the black is present, the conditions are substantially as before; the perception may require slightly longer, the will-time is probably the same. The results of such experiments are given in Table XIV.

If, instead of black, we place a colour on the white card, the perception becomes slightly more difficult; it is not quite so easy to see that something is there when it is yellow as when it is black, the will-time however presumably remains the same. In one series of experiments (to the left in Table XV.) only one colour was used at a time, in a second series (right in Table

XV.) ten colours, the observer not knowing which was to come, but not needing to distinguish it before making the motion.

TABLE XIV.

	B				C			
	R	V	R'	V'	R	V	R'	V'
6. I.....	250	20	253	15	236	21	233	16
14.....	227	19	226	7	236	13	234	10
19.....	245	21	249	13	231	14	230	8
20.....	215	20	212	14	244	12	243	7
31.....	227	10	227	7	246	21	241	13
A.....	233	18	233	11	239	16	236	11

TABLE XV.

	22. XII.	B				C				
		R	R'	R	R'	R	R'	R	R'	
		Orange .....	291	296	258	261	22. XII.	289	293	245
Violet.....		262	269	251	255		260	254	259	263
Black.....		250	253	236	233		263	255	250	253
Pink.....	6. I.....	268	263	270	266	6. I.....	238	242	245	240
Brown.....	7.....	295	290	267	263	7.....	278	282	241	244
Gray.....	9.....	291	280	267	265	9.....	234	237	276	277
Red.....	10.....	277	282	264	265	2. II.....	230	230	232	229
Blue.....		265	263	284	279		219	223	242	237
Green.....		262	264	268	268		229	219	245	244
Yellow .....		264	262	280	286		230	228	254	257
A.....		272	272	264	264		247	246	249	248
AV.....		20	13	18	13		25	17	24	17
False.....		1		0			0		2	

It thus takes a little longer to recognise the presence of a colour (even though the colour need not be distinguished) than of a white light. It is to be noticed that B's times became shorter in 1885 than they were in 1884.

We next determine the perception-time when it is necessary to distinguish the colour. Two cases were considered; in one the colours were taken in pairs, and one colour was distinguished

from the other; in the second each colour was distinguished from ten colours. With blue and red electric lights (the above-mentioned Puluj's tube seen through coloured glasses) I got as perception- and will-time  $75\sigma$  for B, 109 for C.<sup>1</sup> In most of my experiments however, with aid of the gravity-chronometer, I used daylight reflected from coloured surfaces, these exciting the processes with which our brain is occupied in our daily life. Red and blue and green and yellow were taken in pairs, the coloured surface being  $3 \times 30$  mm. The numbers in Table XVI. give the average of six series.

TABLE XVI.

		B				C			
		R	V	R'	V'	R	V	R'	V'
27. XI.-2. XII.	Red....	278	22	272	11	322	40	324	26
	Blue...	287	19	280	17	291	24	288	16
I-5. XII.....	Green..	268	26	265	18	313	32	312	21
	Yellow	276	26	273	16	297	31	300	20
	A.....	277	23	272	15	306	32	306	21
	AV.....	2				8			

Ten colours were further taken in pairs, as indicated in Table XVII., and the time required to distinguish the one from the other determined.

If we average together the results given in Tables XVI. and

<sup>1</sup> These are the only experiments described in this section which had been previously made; Donders (*Archiv f. Anat. u. Physiol.*, 1868) found the time to be  $184\sigma$ , Wundt (*Physiol. Psych.*, 11, 251) 210 to  $250\sigma$ , v. Kries and Auerbach, working under the direction of Hélmholtz (*Archiv f. Anat. u. Physiol.*, 1877), 12 and  $34\sigma$ . I cannot accept the results reached by these latter experimenters. The times seem to be too short to be correct. I do not know where the error lies, the experiments having apparently been made with great care, but the simple reactions are very long, the reactions with perception and volition very short. The latter may have been made unduly short through the frequent occurrence of premature reactions (the number of false reactions is not given); at all events I consider their method of calculating the averages dangerous, they ignoring what reactions they saw fit. They do not give the number of measurements made in the series, but in the model series given in the appendix, we find that in one 22 reactions were used, in one on the perception of light only 9; we may therefore assume that in the latter series over half of the reactions were ignored. If the mean variation of the reactions used in this series be calculated, it will be found to be 6 (smaller, I imagine, than the mean error of the recording apparatus); the mean variation of the corresponding series of simple reactions (from which determinations had also been omitted) is  $12\sigma$ . When averages are made up in this way any results desired can be obtained.

TABLE XVII.

		B				C			
		R	V	R'	V'	R	V	R'	V'
22. XII.....	Orange	308	21	309	11	316	47	299	21
	Violet	258	23	262	15	289	16	297	8
6. I.....	Black	267	35	262	26	278	16	275	9
	Pink	288	19	284	14	302	26	303	18
7.....	Brown	308	20	294	15	340	31	323	16
9.....	Gray	283	12	287	6	397	80	367	31
10.....	Red	278	22	272	11	322	40	324	26
	Blue	287	19	280	17	291	24	228	26
	Green	268	26	265	18	313	32	312	21
	Yellow	276	27	273	16	297	31	300	20
	A.....	282	22	279	15	314	34	303	20
	False...	1				5			

XVII., and subtract the reaction-time and supposed will-time, we find that it took B 100, C  $110\sigma$ , to distinguish one colour from another.

In the series of experiments next to be given, I determine the time it takes to distinguish a colour from nine others, that is the real perception-time for a colour. The results of ten series in which the motion was made with the hand, and of five in which it was made with the speech-organs, are given in Table XVIII.

This gives as the time needed to distinguish a colour  $105\sigma$  for B,  $117\sigma$  for C; respectively 5 and  $7\sigma$  longer than it took to distinguish one colour from another, and 26 and  $41\sigma$  longer than it took to see that a colour was present when it was not necessary to distinguish it.

The results given in Table XVIII. (where the reaction was made with the hand) were obtained at the beginning of the investigation; the determinations were repeated after four months of constant practice, and again after a pause of three months, the results being given in Table XIX.

Practice therefore shortened the perception- and will-times about  $30\sigma$  for B and  $20\sigma$  for C, and this decrease in the length of the times was not lost by an interruption in the practice.

With the same methods I found the time it takes to see or distinguish a letter. I tried in my experiments to determine the time taken up by those operations which are constantly going on in the brain; the letters chosen therefore were such as we usually have to read (of the size in which this is printed). The time for larger letters is somewhat shorter. In the first experiments it was not necessary to distinguish the letter, only to know that a letter was present; the conditions were consequently the same as in the first experiments (Table XV.) on colours.

TABLE XVIII.

		B				C			
		R	V	R'	V'	R	V	R'	V'
		HAND.							
17. XII.....	Red....	317	19	310	10	341	31	340	20
	Green...	298	19	291	10	330	31	338	22
18.....	Gray...	302	29	295	20	316	33	319	22
	Blue...	289	28	276	9	316	7	315	3
19.....	Yellow	260	12	261	9	317	24	310	14
	Black...	283	22	284	14	289	15	293	9
	Orange	309	51	290	23	285	20	279	12
	Violet...	302	16	299	11	312	34	308	24
	Brown...	318	12	314	8	313	30	313	18
	Pink...	293	30	282	12	312	22	305	12
	A.....	297	24	290	13	313	25	312	16
	False...					4			
SOUND-KEY.									
17. II.....	Red....	306	35	297	18	359	25	360	19
	Green...	293	11	289	7	360	12	364	7
19.....	Black...	286	34	279	17	306	16	311	11
	Violet...	271	30	265	22	309	20	304	14
21.....	Brown...	296	18	291	11	359	46	347	32
	A.....	290	26	284	15	339	24	337	17

TABLE XIX.

		B		C			B		C	
		R	R'	R	R'		R	R'	R	R'
Red.....	4. IV...	244	237	294	287	2. VII...	283	267	292	286
Green.....		247	239	311	309	4.....	247	252	277	278
Gray.....	7.....	270	258	283	279	31.....	264	257	325	314
Blue.....		246	246	273	275		253	257	286	279
Yellow.....	8.....	290	249	304	302		245	245	267	264
A.....		259	246	293	290		258	256	289	284
AV.....		35	13	16	10		30	17	24	15
False.....		5		2			0		0	

TABLE XX.

	B				C			
	R	V	R'	V'	R	V	R'	V'
3. II.....	261	31	260	18	268	12	266	11
27. III.....	234	21	228	12	235	23	229	11
1. IV.....	205	37	194	23	261	32	255	25
	230	38	220	25	251	24	255	19
	206	18	208	6	277	23	281	16
A.....	227	29	222	17	258	23	257	16

It therefore (making the same assumptions as above) took B 47, C  $58\sigma$ , to see that a small object was on a white surface.

The next case to be given is where it was necessary to distinguish one of two letters from the other, A and Z being taken. The averages given are taken from six series.

TABLE XXI.

		B				C			
		R	V	R'	V'	R	V	R'	V'
4.—10. XII.....	A .....	315	26	319	16	327	31	323	18
	Z .....	330	31	325	21	348	29	348	21
	A.....	322	28	322	18	337	30	335	19
	False..	3				5			

It thus took B 142, C  $137\sigma$ , to distinguish one letter from another, respectively 45 and  $31\sigma$  longer than to distinguish one colour from another.

We now come to consider the time needed to distinguish one letter from all the others ; that is the time it takes to see a letter. This is a process with which our brain is constantly busy ; the time taken up by it is therefore of special interest. If for example the time is different for the several letters, it is a matter of the greatest practical importance, for those letters which it takes the longest to see might be so modified as to shorten the time. If it takes  $20\sigma$  longer to see E than it would to see a symbol that might be taken in its place, say  $\Delta$ , it is startling if we calculate how much time is being wasted and how much unnecessary strain is being put on eye and brain. I have published<sup>1</sup> extended series

<sup>1</sup> *Phil. Studien*, ii. 4 ; *Brain*, No. 31.

of experiments, determining the time the light reflected from a printed letter must work on the retina in order that it may be possible to see the letter. These experiments show that there is a great difference in the legibility of the several letters; out of 270 trials W was read correctly 241, E only 63 times. In this case the whole time was short, 1 to  $1\frac{1}{2}\sigma$ , and the difference in the time for the several letters correspondingly small. When however we determine the entire time needed to recognise the letter, we may expect to find the time considerably shorter for a simple and distinct symbol than for one complicated or easily confused with others, just as the time is shorter for a colour than for a letter.<sup>1</sup> The speech-organs as well as the hand were used in these experiments. Here however a slight complication is added, as we cannot be sure that a difference in the time for the several letters is to be referred only to the perception-time, it being possible that the time needed to name the several letters or to register the different motions may be different. This difference in time can however only be very small, as the observer knew what letter he had to name, so there was no choice between different motions, as in the experiments to be considered in the next section of this paper. Tables XXII.-XXIV. (placed, with others, at the end of this paper) give the results obtained at different times, the motion being made both with the hand and the speech-organs.

A shortening in the time through practice will be noticed in these Tables; if we take Table XXIII., which contains the most determinations and times representing about the average of the three Tables, we find the perception-time for a capital letter of the size in which this is printed to be  $119\sigma$  for B,  $116\sigma$  for C. The Tables contain the results of a great many experiments, but not enough to determine finally the time for the several letters; if however the four series made with the hand on E and M are averaged together, we find that it took B  $19\sigma$ , C  $22\sigma$  longer to see E than to see M. The order for the five letters on which four series were made is M A Z B E, which (except the position of Z) agrees with the order of legibility established in the paper referred to.

Similar determinations were made with the small letters, the results being given in Table XXV. It seems from this Table

<sup>1</sup> I have not been able to determine accurately and finally the perception-time for different alphabets and for the several letters. In these experiments the different letters cannot well be used in the same series, and further in half the cases no measurement is made. As the difference in the times is small and the variation of the series not inconsiderable, a large number of experiments must be made before the difference in the time for the several letters can be determined with certainty. This is however not only a subject of scientific interest, but also of great practical importance; it is to be hoped that it will be thoroughly investigated by independent experimenters.

that the perception-time is about the same for the large and small letters, which agrees with experiments I have made by an entirely different method (see *MIND* 41).

We now come to consider the time it takes to see a word, a process with which the brain is constantly occupied. Twenty-six words were taken, and when the expected one was seen the observer lifted his hand. The perception-time so determined is the time needed to distinguish the word from the other twenty-five; the time is slightly longer when it is necessary to distinguish words from others very similar in form; for example, hand from band. Indeed we must remember that perception is not a sharply defined process. As I have shown, we see a letter before we see what letter it is; in like manner a further time passes before we see the letter in all its details, that it is not perfectly printed, for example. The perception-time for a painting by Raphael is indefinitely long. The results of experiments with English and German words are given in the Tables XXVI.-VII.

The Tables give us a perception-time for short English words B 132, C 141 $\sigma$ ; for short German words B 118, C 150 $\sigma$ ; for long English words B 154, C 158 $\sigma$ . The time was therefore slightly shorter (B 22, C 17) for a short than for a long word, and for a word in the native than in a foreign language (B 14, C 9). It will be noticed that the perception-time is only slightly longer for a word than for a single letter; we do not therefore perceive separately the letters of which a word is composed, but the word as a whole. The application of this to teaching children to read is evident; I have already in connexion with other experiments called attention to it.

The only other perception-time we have to consider is for a picture. It takes, we may suppose, about the same time to recognise the picture of a tree as it takes to see the tree itself; this is consequently a process nearly always going on in the brain. I had carefully drawn twenty-six pictures of common objects, tree, hand, ship, etc., about one square cm. in size, the method of determining the perception-time being as before.

We thus find that the perception-time for a picture, and we may assume for the objects we are continually seeing in our daily life, was 96 $\sigma$  for B, 117 for C, about the same as for a colour and shorter than for a letter or word.

*(To be concluded.)*

TABLE XXII.

		B				C			
		R	V	R'	V'	R	V	R'	V'
		HAND.							
11. XII.....	B.....	358	25	354	18	342	28	346	17
12.....	Z.....	345	24	350	18	370	33	353	20
	A.....	327	31	314	14	337	22	342	16
16.....	M.....	338	36	345	20	329	15	324	7
	E.....	360	31	345	9	343	28	326	9
17.....	S.....	333	22	326	11	341	25	338	17
	P.....	339	24	332	14	329	32	318	18
	T.....	330	29	320	16	323	30	330	18
18.....	O.....	293	19	297	11	302	25	301	18
	L.....	338	15	339	10	350	37	333	16
	A.....	336	26	332	14	337	27	331	16
	False..	5				4			
		SOUND-KEY.							
17. II.....	A.....	330	27	337	17	406	16	401	11
19.....	M.....	336	36	332	30	410	29	412	17
21.....	E.....	308	36	310	22	359	35	354	28
24.....	P.....	311	22	307	13	321	13	325	8
26.....	O.....	303	21	307	16	380	33	372	27
	A.....	318	28	319	20	375	25	373	18
	False..	1				1			

TABLE XXIII.

	HAND.				LIP-KEY.							
	B		C		B		C					
	R	R'	R	R'	R	R'	R	R'				
A.....	13.	I.....	309	312	323	328	15.	I.....	288	295	338	332
B.....	12.....		307	311	353	350	13.....		348	353	362	363
C.....	17.....		304	306	319	322	17.....		307	310	333	325
D.....			342	309	332	341			320	324	346	354
E.....	14.....		328	334	341	345	15.....		333	345	340	330
F.....	17.....		322	324	358	344	20.....		307	310	317	321
G.....			326	321	331	327			309	308	311	309
H.....	19.....		323	320	320	317			305	308	338	333
I.....			294	293	295	301			271	275	296	290
J.....			329	326	299	288	21.....		342	338	330	335
K.....			330	335	305	297			334	334	315	314
L.....	14.....		296	304	302	299	29.....		320	302	357	353
M.....	13.....		311	316	320	322	15.....		342	330	373	366
N.....	20.....		318	317	333	330	21.....		318	321	323	328
O.....	14.....		263	266	292	288	13.....		315	319	355	352
P.....			288	284	337	326	29.....		321	324	338	339
Q.....	20.....		317	315	315	319	21.....		312	314	312	302
R.....			311	313	322	317			334	340	322	315
S.....	14.....		285	281	327	332	15.....		318	325	313	313
T.....			319	295	310	305	29.....		318	315	366	363
U.....	20.....		311	298	329	331	24.....		320	320	335	331
V.....	22.....		322	330	334	330			324	327	333	338
W.....			278	283	338	332			312	314	343	345
X.....			315	297	349	341			292	297	362	366
Y.....			303	307	341	337			318	313	339	339
Z.....	12.....		323	319	347	345	13.....		350	343	331	324
A.....			310	308	326	324			318	319	336	334
AV.....			22	15	22	14			22	14	25	16
False.....			13		13				18		4	

TABLE XXIV.

		B		C			B		C	
		R	R'	R	R'		R	R'	R	R'
B.....	5. IV....	275	262	321	319	31. VII..	307	308	304	306
Z.....	6.....	272	273	310	301		313	314	311	303
A.....		276	281	292	288	2.....	295	295	309	302
M.....	7.....	293	291	302	306	4.....	298	299	307	306
E.....	8.....	316	316	337	331		313	306	315	319
A.....		286	285	312	309		305	304	309	307
AV.....		25	16	20	13		22	14	26	18
False.....		2		3			0		0	

TABLE XXV.

		HAND.					LIP-KEY.				
		B		C			B		C		
		R	R'	R	R'		R	R'	R	R'	
b.....	5. I....	301	306	314	306	22. I....	313	317	327	321	
z.....		307	298	324	325		305	300	336	322	
a.....	7.....	316	320	327	320	23.....	330	328	313	309	
m.....		310	312	311	313		310	304	313	315	
e.....	12.....	337	342	356	356		331	321	330	322	
s.....		322	325	368	359		297	290	338	343	
p.....	13.....	323	320	341	337	28.....	345	345	370	372	
t.....		311	310	319	315		305	300	346	342	
o.....	14.....	293	290	306	304		299	299	335	332	
l.....		303	300	306	304		311	314	344	339	
A.....		312	312	327	324		315	312	335	332	
AV.....		19	13	28	19		20	11	25	16	
False.....		4		8			7		2		

TABLE XXVI.

		HAND.				LIP-KEY.				
		B		C		B		C		
		R	R'	R	R'	R	R'	R	R'	
Mind.....	12. XII.	353	352	337	329	13. I....	360	366	374	364
Life.....	15.....	348	351	373	377		366	367	363	365
Time.....	16.....	333	330	375	372	15.....	311	312	371	366
House.....		377	366	383	389		331	324	355	361
Child.....		345	343	328	339	17.....	347	341	370	375
Year.....	18.....	353	359	369	360		337	336	354	358
Truth.....		352	329	376	367	29.....	302	311	360	353
Name.....		341	339	392	393		313	315	374	380
Light.....	19.....	332	328	327	323		325	332	372	372
Ship.....		318	313	336	332		294	302	340	340
A.....		345	341	360	358		329	331	363	363
AV.....		24	13	26	17		23	12	28	20
False.....		2		4			7		0	
Education....	5. I.....	331	331	346	348	17. I....	349	345	382	386
Philosophy....		330	322	349	354		347	351	376	377
Knowledge....	7.....	341	337	366	360	22.....	353	348	329	319
Architecture....		377	375	382	377		357	355	336	340
Literature....	10.....	339	320	363	354	23.....	333	332	377	382
Temperance....		341	333	399	404		339	330	377	376
Ignorance....		300	297	380	369		325	319	378	382
Physician....		325	329	380	375	26.....	339	333	351	346
Euthusiasm....	12.....	334	337	405	409		353	349	409	400
Imagination....		321	317	384	375		342	337	395	391
A.....		334	330	375	373		344	340	371	370
AV.....		25	16	28	19		23	15	27	17
False.....		8		8			6		9	
Buch.....	24. I....	290	294	367	363	23. I....	315	318	359	355
Zahl.....		309	311	380	378		310	319	370	378
Kunst.....		307	309	369	374		310	314	362	352
Welt.....		308	307	361	353		308	305	362	362
Haus.....	26.....	295	292	354	353	24.....	299	297	339	344
Licht.....		324	323	354	359		330	329	356	350
Kind.....		323	323	377	380		303	308	352	356
Land.....	29.....	309	307	363	365	26.....	316	321	373	365
Traum.....		321	316	377	376		324	325	368	373
Jahr.....		319	318	365	368		321	325	374	378
A.....		311	310	367	367		314	316	362	361
AV.....		14	9	20	13		17	12	31	20
False.....		6		5			10		7	

TABLE XXVII.

		HAND.					SOUND-KEY.				
		B		C			B		C		
		R	R'	R	R'		R	R'	R	R'	
6. IV.	Mind...	266	269	312	306	14. II.	Mind...	311	307	380	391
	Life.....	302	292	340	340	19.....	Life.....	338	333	400	409
7.....	Time....	307	303	325	330	24.....	Child...	319	326	360	364
8.....	House...	299	296	321	317		Truth...	317	318	339	345
	Child...	282	284	327	322	26.....	Ship....	320	326	361	367
	A.....	291	289	325	323			321	322	368	375
	AV.....	18	10	22	14			27	19	25	16
	False....	5		0				3		4	

TABLE XXVIII.

	Picture of a	B				C			
		R	V	R'	V'	R	V	R'	V'
		HAND.							
12. II...	Watch.....	262	23	249	15	295	21	292	14
	Ship.....	264	19	268	13	324	31	320	16
	Eye.....	271	17	266	11	313	24	316	9
20. III...	Hand.....	297	20	294	15	282	37	266	10
	Tree.....	246	12	244	7	296	28	302	23
	Bird.....	289	28	297	15	310	43	291	10
24.....	Fish.....	290	19	293	17	301	23	294	13
	Leaf.....	267	12	265	9	321	31	317	26
	Hat.....	270	28	277	22	306	21	312	10
	Shoe.....	283	17	286	12	341	23	346	18
	A.....	274	19	274	14	309	28	306	15
	False....	8				8			
		SOUND-KEY.							
17. II...	Watch.....	308	32	302	14	364	44	357	34
19.....	Eye.....	341	30	336	25	408	40	408	25
21.....	Tree.....	283	27	276	17	374	32	361	17
24.....	Fish.....	309	38	315	22	304	23	296	15
26.....	Hat.....	305	42	296	24	367	59	348	36
	A.....	309	34	305	20	363	40	354	25
	False....	2				2			

## ON THE TIME-SENSE.

By LEWIS T. STEVENS.

The experiments which form the basis of this article have been in progress during the past two years: the greater portion of them were performed, under the supervision of Professor G. Stanley Hall, in the Psychophysical Laboratory of the Johns Hopkins University, Baltimore; the results there obtained have received confirmation from additional experiments made in the Physiological Laboratory of Professor Henry P. Bowditch, at the Harvard Medical School, Boston. The method of experimenting was somewhat similar to that of Vierordt,<sup>1</sup> and consisted, in a general way, in impressing upon the mind intervals of time by means of a metronome, and in reproducing the same after the metronome had been stopped.

The apparatus employed in the research was a horizontal-drum kymographion of Marey, with horizontal-screw attachment, by means of which was obtained a continuous spiral tracing. A delicate time-marker, writing upon the sooted-paper coating of the drum, was attached to the vertical support seated upon the horizontal screw, and by the revolution of the latter was made to proceed slowly from one end of the drum to the other. A tuning-fork, or a vibrating rod,<sup>2</sup> and a resistance-coil were placed in the same electrical circuit with this time-marker. In a shorter circuit with the tuning-fork were placed a mercury-cup and a compound lever; this latter being so constructed that by depressing one end with the finger the other extremity (hook-shaped) was made to dip into the cup of mercury and thus close the circuit. When the hooked extremity was out of the mercury-cup, the time-marker registered the oscillations of the tuning-fork, but by tapping the lever the fork was shifted into the shorter circuit, and its vibrations failed for a moment to be recorded. By tapping the lever, therefore, at the beginning and the end of an interval of time, the interval could be recorded upon the sooted paper, and its length be subsequently determined by counting the number of vibrations between two successive interruptions on the tracing. This end was attained at one stage of the investigation by inserting a Morse's key into the same circuit with the tuning-fork and the time-marker, and thus directly breaking the circuit; but the key possessed the disadvantages of requiring a considerable amount of muscular force to press it, and of

<sup>1</sup> See References at the end.

<sup>2</sup> In five out of the seven series of experiments to be reported, a tuning-fork vibrating 50 times per sec. was used; in the remaining two series, in order to render the task of counting out the tracings less tedious, a rod making 10 vibrations per sec. was employed.

making, at the same time, a sharp click. What influence the introduction of muscular force into the experiment would exert upon the time-sense, beyond that of fatigue, is not definitely known; and the same can be said for the influence of sensory impressions. But it was desirable to exclude, as far as was possible, all probably complicating conditions from the method, and, consequently, for the Morse's key was substituted the compound lever, which worked noiselessly and with the least possible resistance.

The individual under experiment tapped the lever synchronously with the beats of a metronome. When he had become perfectly familiar with the given interval, the drum was set in motion and the first round of the tracing was taken, with the metronome still beating; the latter was then stopped, while the person kept on tapping the lever at the same rate. The average of the intervals recorded in the first line of the tracing was the standard time; the rest of the tracings gave successive reproductions of this standard.

At first, the duration of each experiment was from two to three minutes, but this brought on fatigue so rapidly that it was impossible to obtain more than four or five experiments at one sitting. It was, therefore, reduced to one minute, under which condition ten or even more could be readily made at one time. In the discussion of the results, the reproductions for the first minute only will be considered in those cases where the experiments extended beyond that time.

Between two successive experiments there was an intermission of at least three minutes; in the majority of the series its length was from five to ten minutes.

In the majority of experiments the standard intervals ranged between .36 sec. and 1.5 secs.; there are several observations for .27 sec., and only one for 2.9 secs.

Experiments, to the number of 135 in all, were performed upon seven different individuals. Of these, 114 point to this fundamental principle:—That there is an interval of time (the value of which varies between .53 and .87 sec.) which can be reproduced with considerable accuracy; but with all other intervals an error is made, which is *plus* for those above and *minus* for those below the so-called indifference-point.

These will be spoken of as the "regular" experiments.

The remaining 21 follow no recognised law, and, in contradistinction to the 114, will be called the "irregular" experiments.

#### A. *Regular Experiments.*

The value of the standard interval being from .53 to .87 sec., and the duration of an experiment one minute, each experiment consists in reproducing the standard interval from about 40 to

150 times, according to its length. To condense the results for publication, a certain amount of averaging has been necessary. In the following Tables, the first figure in each column represents the value of the standard, expressed in thousandths of a second; the second figure, the average of the reproductions of the standard for the first five seconds; the third, the average of the reproductions for the second five seconds; and so on, to the end of the experiment.

In Tables II., III. and IV. are given only a fraction of the total number of experiments performed upon the subjects; in these cases, those experiments are selected for publication which show the average amount of variation. In Tables I., V., VI. and VII., one or several regular experiments are omitted from each for the reason that they are mere repetitions of one or more of those which are given.

I.—O.S. 12 EXPERIMENTS, ALL REGULAR.

1·440	·966	·830	·740	·710	·677	·610	·590	·480	·360
1·477	1·006	·857	·748	·728	·666	·604	·582	·474	·348
1·454	·993	·860	·756	·708	·670	·590	·564	·464	·346
1·500	·990	·853	·754	·714	·672	·582	·556	·462	·348
1·515	1·038	·860	·754	·708	·670	·584	·546	·452	·338
1·498	1·013	·853	·734	·700	·678	·588	·560	·448	·328
1·536	1·000	·850	·754	·712	·668	·594	·542	·452	·342
1·494	1·032	·870	·742	·714	·680	·578	·544	·446	·338
1·522	1·015	·850	·742	·700	·670	·580	·552	·446	·336
1·510	1·028	·875	·752	·706	·654	·588	·560	·444	·334
1·570	1·041	·868	·768	·710	·654	·600	·554	·440	·332
1·543	1·046	·882	·770	·722	·674	·590	·556	·440	·332
1·580	1·008	·852	·764	·714	·680	·596	·548	·470	·326

II.—I.I.H. 36 EXPERIMENTS, OF WHICH 5 ARE IRREGULAR.

1·360	·987	·730	·653	·593	·525	·492	·442	·410	·360
1·448	·960	·749	·657	·591	·522	·481	·442	·398	·351
1·498	·908	·786	·667	·596	·520	·491	·432	·400	·351
1·475	·939	·757	·641	·593	·542	·486	·446	·403	·351
1·470	·985	·783	·663	·589	·540	·489	·445	·400	·351
1·547	1·018	·767	·675	·600	·540	·484	·456	·408	·349
1·545	1·035	·783	·659	·600	·532	·482	·436	·400	·350
1·510	1·065	·729	·676	·600	·519	·490	·442	·405	·345
1·530	1·062	·757	·670	·611	·524	·491	·427	·403	·352
1·485	1·101	·783	·670	·600	·492	·490	·425	·389	·349
1·487	1·126	·783	·689	·600	·512	·490	·422	·413	·349
1·543	1·153	·800	·691		·510	·486	·418		·351
1·525	1·163	·800			·534	·494	·426		·347

## III.—H.P.B. 38 EXPERIMENTS, OF WHICH 6 ARE IRREGULAR.

1.250	.900	.800	.731	.708	.640	.594	.569	.540	.488
1.263	.917	.817	.729	.714	.631	.588	.561	.564	.480
1.275	.917	.800	.743	.707	.625	.587	.550	.524	.475
1.323	.922	.850	.737	.693	.625	.578	.563	.533	.467
1.318	.928	.833	.734	.714	.619	.589	.559	.520	.464
1.268	.960	.850	.743	.714	.625	.596	.556	.524	.463
1.323	.980	.833	.729	.710	.625	.601	.561	.518	.466
1.350	.940	.862	.729	.719	.633	.603	.569	.550	.469
1.367	.960	.888	.757	.729	.639	.600	.570	.520	.476
1.400	1.023	.850	.757	.700	.640	.613	.563	.520	.490
1.450	.994	.867	.817	.743	.639	.635	.589	.546	.486
1.423	.946	.818	.817	.729	.669	.615	.587	.528	.474
1.433		.868	.808	.729	.675		.597	.527	.480

## IV.—F.S.L. 18 EXPERIMENTS, OF WHICH 3 ARE IRREGULAR.

1.467	1.100	875	.822	.746	.727	.662	.620	.476	.387
1.517	1.109	.883	.817	.731	.728	.660	.628	.464	.379
1.577	1.168	.860	.826	.714	.698	.635	.595	.468	.377
1.540	1.212	.839	.828	.706	.700	.608	.585	.463	.366
1.530	1.158	.835	.824	.737	.692	.633	.602	.466	.370
1.534	1.170	.857	.842	.718	.667	.616	.607	.458	.359
1.572	1.166	.831	.799	.716	.692	.617	.595	.461	.357
1.501	1.095	.855	.833	.733	.688	.610	.598	.447	.377
1.474	1.163	.877	.806	.739	.711	.623	.603	.449	.364
1.555	1.140	.884	.788	.736	.712	.621	.598	.467	.357
1.515	1.140	.884	.791	.710	.716	.607	.605	.454	.362
1.530	1.129	.883	.795	.703	.700	.623	.587	.455	.362
1.473	1.150	.925	.791	.713	.708	.632	.600	.456	.354

## V.—G.S.H. 9 EXPERIMENTS, OF WHICH 2 ARE IRREGULAR.

1.535	.826	.721	.636	.508	.268
1.670	.823	.713	.613	.492	.261
1.687	.821	.712	.608	.496	.259
1.573	.802	.697	.620	.488	.262
1.677	.794	.701	.618	.505	.261
1.680	.849	.691	.611	.492	.260
1.650	.824	.683	.616	.488	.266
1.640	.824	.705	.608	.479	.262
1.713	.810	.702	.623	.499	.269
1.587	.837	.681	.620	.482	.271
1.676	.802	.681	.617	.472	.262
1.763	.834	.704	.628	.470	.268
1.703	.801	.694	.604	.480	.264

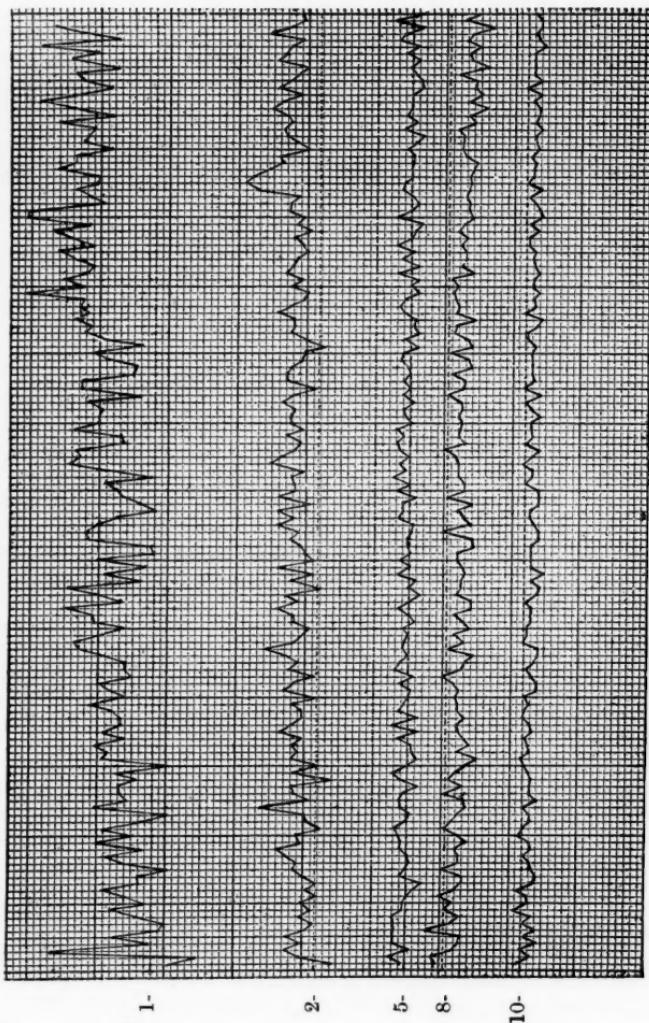
## VI.—L.T.S. 11 EXPERIMENTS, OF WHICH 1 IS IRREGULAR.

1·480	·750	·744	·660	·590	·500	·360	·260
1·571	·777	·787	·660	·583	·494	·356	·245
1·494	·807	·789	·667	·580	·462	·351	·259
1·556	·830	·743	·653	·588	·486	·348	·258
1·544	·792	·794	·654	·583	·490	·335	·254
1·516	·815	·803	·636	·578	·496	·346	·261
1·537	·829	·791	·640	·548	·490	·347	·256
1·540	·823	·786	·659	·547	·488	·345	·251
1·574	·850	·789	·653	·562	·490	·367	·252
1·574	·890	·776	·651	·564	·496	·337	·252
1·587	·870	·783	·680	·571	·486	·332	·250
1·552	·870	·851	·657	·569	·494	·342	·246
1·536	·875	·809	·653	·580	·492	·332	·248

## VII.—H.H.D. 11 EXPERIMENTS, OF WHICH 4 ARE IRREGULAR.

1·458	·979	·730	·600	·472	·400
1·488	1·006	·751	·597	·462	·390
1·436	·970	·718	·602	·458	·394
1·589	·998	·726	·588	·438	·369
1·602	·955	·739	·596	·434	·365
1·694	·941	·731	·600	·447	·356
1·693	·994	·734	·605	·436	·344
1·663	1·050	·733	·585	·482	·340
1·582	1·021	·726	·596	·435	·335
1·647	·999	·732	·562	·442	·333
1·683	1·011	·735	·559	·442	·340
1·688	·987	·718	·579	·434	·335
1·619	·971	·747	·590	·442	·345

A glance at these Tables shows that, in each case, short intervals are shortened and long intervals are still further lengthened in their reproduction; and that somewhere between the two extremes is an interval, in the reproduction of which there is made practically no error. These points are more plainly seen in the annexed series of curves, which represents, in detail, experiments 1, 2, 5, 8, 10 of Table I. Each mm. of ordinate represents .02 sec. The dotted line for each curve (opposite which the number of the experiment is placed) represents the level of the standard interval above the common base-line. The curve is obtained, in each case, by joining with straight lines the upper limits of the ordinates, the lengths of which represent the value of successive reproductions of the standard interval. The ordinates are separated from each other by a space of 1 mm. Where no error is made in reproducing the standard, the curve hugs the dotted line, as is the case with the middle one. Where an error is made, the curve recedes more and more from the dotted line, according to the amount of the error; and is above or below it, according as the error is *plus* or *minus*.



The amount of error made for each interval, and the position of the indifference-point, are better shown in the following Tables, which represent the experiments in a still more compact form. In the first column of each are placed the standard intervals; opposite these, in the second column, are the averages of the total number of reproductions for one minute; and in the third column is shown the amount of error made in each case.

	Standard.	Reproduced.	Error.
I.	1.440	1.517	+ 5.4 per cent.
	.966	1.018	+ 5.4 "
	.830	.861	+ 3.7 "
	.740	.753	+ 1.8 "
	.710	.711—	+ 1 " "
	.677	.670	- 1.0 "
	.610	.590	- 3.3 "
	.590	.555	- 5.9 "
	.480	.454	- 6.3 "
	.360	.337	- 6.4 "
II.	1.360	1.502	+ 10.5 "
	.937	1.043	+ 10.3 "
	.730	.773	+ 5.9 "
	.653	.669	+ 2.4 "
	.593	.598	+ .9 "
	.525	.524—	- .2 "
	.492	.488	- .8 "
	.442	.435	- 1.6 "
	.410	.402	- 2.0 "
	.360	.350	- 2.8 "
III.	1.250	1.349	+ 7.9 "
	.900	.953	+ 5.9 "
	.800	.845	+ 5.6 "
	.731	.758	+ 3.7 "
	.708	.717	+ 1.3 "
	.640	.637	- .5 "
	.594	.600	+ 1.0 "
	.569	.569—	0.0 "
	.540	.528	- 2.2 "
	.488	.474	- 2.9 "
IV.	1.467	1.527	+ 4.1 "
	1.100	1.150	+ 4.5 "
	.875	.868—	- .8 "
	.822	.812	- 1.2 "
	.746	.721	- 3.4 "
	.727	.701	- 3.6 "
	.662	.624	- 5.7 "
	.620	.599	- 3.4 "
	.476	.459	- 3.6 "
	.387	.365	- 5.7 "
V.	2.850 <sup>1</sup>	3.410	+ 19.7 "
	1.535	1.668	+ 8.7 "
	.826	.819—	- .9 "
	.721	.697	- 3.3 "
	.636	.616	- 3.2 "
	.508	.487	- 4.1 "
	.268	.264	- 1.5 "

<sup>1</sup> This experiment was not included in the preceding Tables, because of the impossibility of dividing it up into periods of 5 seconds.

VI.	1.480	1.548	+ 4.6	per cent.
	.750	.836	+ 11.5	"
	.744	.792	+ 6.5	"
	.660	.655	- .8	"
	.590	.571	- 3.2	"
	.500	.489	- 2.2	"
	.360	.345	- 4.2	"
	.260	.253	- 2.7	"
VII.	1.458	1.615	+ 10.8	"
	.979	.992	+ 1.3	"
	.730	.733	+ .4	"
	.600	.588	- 2.0	"
	.472	.446	- 5.5	"
	.400	.354	- 11.5	"

These Tables show very plainly the main point of the paper, namely, that the error made in the reproduction of the longer intervals is *plus*, of the shorter ones, *minus*; and that at some point between the two extremes the error approaches zero.

The value of this indifference-point is found not to be constant, but to vary for different individuals between .53 and .87 sec., the average being about .71 sec. The position of the indifference-point is not so accurately defined in Case III. as it is in the others. The reason for this is not evident. Of the six regular experiments made for intervals from .55 to .70 sec., the mean value of the standard interval is .61 sec., and the average of the error of reproduction is .3 per cent., the individual variations not being, algebraically, more than 1 per cent.

With reference to the amount of variation, the number of experiments is, in the majority of cases, not sufficient to give the results a quantitative value. The amount of variation depends upon the fixedness of the attention on the work, and upon the experience which one has had in estimating and holding intervals of time. The complaint was made quite frequently by several of the gentlemen of their inability, at times, to keep their whole attention upon the experiment; and subsequent examination of such experiments showed that the error made was either contrary to the law above stated, or was in the proper direction but abnormally large in amount. The effect of practice was well seen in Case III., where a great number of observation swas made. In the first few experiments very large errors were made; but as the work proceeded, they gradually diminished in amount, until they reached, on the average, the size that is represented, for the various intervals, in the Tables. Tables I. and II. were obtained from gentlemen who are musicians by profession; in the second case, where numerous experiments were made, the uniformity in the amount of variation was a noted feature from the very start. Moreover, in both these cases there was not that difficulty which was experienced by certain of the others, in grasping the longer intervals of time.

Diversion of attention and small experience are, therefore, regarded as the cause of the great irregularity in the size of the errors that is observed in the last four Tables.

The first three Tables, however, possess a certain quantitative as well as qualitative value; and in these it is observed that the error gradually increases in amount, as the indifference-point is moved from, in either direction. As to the manner of variation, examination of the curves (p. 398) reveals two remarkable points. (1) The constant zig-zag of individual records. This is a peculiarity which was observed in all the curves plotted.<sup>1</sup> Of the series of curves published, the upper one shows about 19 cases only out of about 140 in which two sequent variations are in the same direction. This would seem to indicate that an interval is judged more correctly after it is completed than before, and that correction is made for its error in the next reproduction, according to a standard which the mind carries but to which the hand (or perhaps the will during the interval) cannot be accurately true. The origin of this peculiarity would, therefore, appear to lie not in the judgment, but in the execution. (2) In all of the curves plotted, there were observed more or less distinctly still larger and more primary waves. The prominence of these varied greatly; in some of the curves they were apparently absent, in others they were decidedly marked. On p. 398, three such waves are plainly seen in the first, and one each in the second and fourth curves; in the third and fifth they are not so evident, but their existence is shown by enlarging these curves. Taking into consideration all of the curves that were plotted, it may be stated that these waves are no more prominent for one interval than for another, as the published curves would indicate. The length of these waves, expressed in fractions of a minute, varies, in the majority of cases, between '6 and '9 min., and averages '73 min.<sup>2</sup> This rhythmical variation seems to be not in the execution, but rather to have its origin in a rhythmical variation of the standard carried in the mind. That this is connected with the rhythmical changes in the nutritive condition of the cerebral centres, as produced by the vaso-motor rhythmical constriction of arterioles, it would be rash to deny or affirm, or, perhaps, even to suppose.

#### B. *Irregular Experiments.*

The following are all of the irregular experiments, given in the form best adapted to show the direction and amount of variation:—

<sup>1</sup> 24 in number, representing experiments from Cases I., IV., V., VI.

<sup>2</sup> The lengths of those detected in the curves obtained from Case I. vary between '63 and '86 min., and averaged '73 min. The average of 15 from Case IV. is '73 min.; of these 12 vary between '62 and '88 min., and the values of the remaining 3 are '56, 1·06, and '91 min. 11 waves from Case V. vary between '62 and '95 min., and average '72 min. 9 from Case VI. vary between '61 and '89 min., and average '73 min.

	Standard.	Average of the total number of reproductions.	Error.	
II.	·800	·798	- 3 per cent.	
	·515	·535	+ 3·9	"
	·506	·526	+ 4·0	"
	·500	·523	+ 4·6	"
	·471	·494	+ 4·9	"
III.	·960	·960	0·	"
	·933	·929	- 4	"
	·647	·681	+ 5·3	"
	·615	·645	+ 4·9	"
	·588	·619	+ 5·3	"
	·493	·510	+ 3·4	"
IV.	·920	·908	- 1·3	"
	·796	·862	+ 8·3	"
	·734	·783	+ 6·7	"
V.	1·115	1·072	- 3·9	"
	·733	·746	+ 1·8	"
VI.	·614	·620	+ 1·0	"
VII.	·632	·657	+ 4·0	"
	·626	·635	+ 1·4	"
	·552	·591	+ 7·0	"

The irregularities consist in reproducing accurately long, in shortening long, and in lengthening short intervals. It must be stated that, in the attempt to get pure results, all those experiments were excluded in which fatigue or inattention spontaneously stated by the subject entered, but no others. The examination of such experiments, however, revealed the fact, that the effect of fatigue is to make the error for short intervals *plus* instead of *minus*, and to increase the amount of variation made in the reproduction of long intervals; and that individuals under experiment are apt, when inattentive, to shorten long and prolong short intervals. Some of these experiments, at least, are, therefore, regarded by the author as those in which fatigue and diversion of attention were existing but not acknowledged conditions. The accurate reproduction of long intervals is regarded as the chance result of the mutual neutralisation of the two opposing factors, the natural tendency to slow, and the effect of inattention.

The conclusion drawn in this paper, with reference to the direction of the variation made in estimating long and short intervals, is in direct opposition to that of previous investigators. Vierordt (1), receiving time-impressions from the beating of a metronome and after the lapse of a short while reproducing them,

found that the reproduced interval was longer than the standard when this was small, shorter when it was great; and that between the two extremes was an interval which could be reproduced quite accurately. This indifference-point was not the same for different individuals, but varied between 1.5 and 3.5 secs. For himself, when the impressions were conveyed through the sense of taste, this interval was from 2.2 to 2.5 secs.; when through the sense of hearing, from 3 to 3.5 secs. These values were obtained when a short time elapsed between reception and reproduction; with the increase or diminution of this, the indifference-point was found to grow longer or shorter.

According to Mach (2), whose experiments were performed according to the method of just perceptible differences, the recognition of the inequality of two intervals of time, one interval following immediately upon the other, is the most delicate at about .37 sec.; and the further from this point the standard interval recedes, the greater must be the difference between the standard and the interval for comparison, in order that they be recognised as unequal. There is, however, considerable discord in his results, which detracts from the value of his conclusions.

Kollert (3) began the long series of experiments that have been performed in Wundt's laboratory. His experiments were performed according to the method of just perceptible differences. Two metronomes were used, the pendulum of each of which was placed in an electrical circuit along with an electro-magnet, so that by the momentary opening of the current a double vibration of the pendulum of the metronome could be effected, and thus an interval of time be marked out. One of the metronomes beat at a rate which was constant for a single series of observations; the other gave out various intervals for comparison with the standard. An intermission occurred between the two intervals, which in length was equal always to the standard. The pendulum of the second metronome was shortened, until a just perceptible difference was observed between its time and that of the first; after which it was elongated, until the subject detected a difference between the two. The mean of these two just perceptible differences gave the error made by the individual under experiment in his estimation of the constant interval. Experiments were made upon seven individuals for intervals extending from .4 to 1.5 sec. The majority of these experiments confirm the general law laid down by Vierordt, but fix the indifference-point between .7 and .8 sec. The remaining, which constitute about one-fourth of the total number of experiments, are called anomalous. In three of the five series of anomalous experiments, the tendency seems to be to bring the value of the indifference-point up to 1 to 1.2 secs.; in the other two, long intervals are prolonged and short ones still further shortened. Wrong decisions were chiefly made for .4 and .5 sec.

Estel (4) and Mehner (5) have extended these investigations, using, practically, the same method, and have incidentally fixed

the value of the indifference-point at '71 sec., as well as shown that the law of Vierordt is applicable, in general, to intervals considerably greater than 1·5 seconds. Their papers, however, deal mainly with the influence of contrast, the multiplicity of the indifference-point, and the validity of Weber's law for the time-sense; their valuable conclusions will not be reported, inasmuch as the experiments in question do not bear upon them.

From this short and very incomplete account of previous experiments, it will be seen that in all cases the conclusion is drawn, that the natural tendency is to subtract from long intervals and to add to short intervals, in reproducing or estimating them. The conclusion drawn in this paper is exactly the reverse. With reference to the value of the indifference-point, however, my results and those of recent investigators are in harmony.

I have no means of forming an opinion as to the cause of the discrepancy between my own results and those of others. The method used by Wundt's students is entirely different from mine. In one, comparison is made of two intervals, and the process is purely mental; while the other consists in catching an interval and reproducing the same, and, of course, in doing so, certain physiological and psychological moments (the exercise of the will, the origination of motor impulses and their transmission along efferent fibres, and the latent period of muscular contraction), in addition to the mental process, enter into the experiment. Whether these factors enter and, if so, how, or whether (as is barely suggested by the anomalous results) fatigue and inattention may have entered more largely into other methods in a way to account for the previous results, seems to require further study.

I regret that other duties prevent me from continuing the investigation, and I now publish my results, not with the intention of denying outright the correctness of previous conclusions, but with the hope that they will act as an incentive to others to proceed with the work, so as to obtain definite information of the possibly existing factors that are capable of so completely perverting the operations of our time-sense.

Before concluding, I have to thank Profs. G. Stanley Hall and Henry P. Bowditch for their advice and assistance; and also the other gentlemen who have kindly acted as subjects for experiment, or have otherwise assisted me.

#### References.

- (1) Vierordt: *Der Zeitsinn*, (1868); cp. Wundt's *Phys. Psych.*, s. 781.
- (2) Mach: Wundt's *Physiol. Psychol.* (1te Aufl.), s. 785.
- (3) Kollert: *Philosophische Studien*, Bd. i., Heft. 1, s. 88.
- (4) Estel: " " " Bd. ii., Heft. 1, s. 37.
- (5) Mehner: " " " Bd. ii., Heft. 4, s. 546.

Boston, January 10th, 1885.

## V.—DISCUSSION.

### COMPARISON—IN PSYCHOLOGY AND IN LOGIC.

By B. BOSANQUET.

It seems a pity to drop so interesting a discussion as that initiated by Mr. Sully on Comparison in MIND 40, and continued by Mr. Bradley in No. 41. I here approach the subject from a different point of view but, I hope, a not uninstructive one.

Comparison in the psychological sense presupposes distinct data, and an interest in comparing them. The data need not be determinate individual objects, but must be so far distinct perceptions as to be nameable or at least recognisable. Thus comparison, in this sense, does not begin with the beginnings of knowledge. The separate data presuppose perceptive judgments, and the interest in comparing them presupposes an import—in the widest sense, a *use*—attaching to some characteristic of the one, and so suggested by reproduction or “redintegration” when we perceive the other. Then the interest arises in asking “How and how far are the two data the same, or how and how far different?” And *such* comparison ends when the judgment loses its special cross-reference to the data with which it starts, and transforms itself into an estimate of each datum by a standard that goes beyond both. “He is an inch taller than me” is a comparative judgment; as also would be “He is of the same height as I am,” or “He is of a different height from me”. But the judgment of identification, “We are both six feet high,” or the judgments involving difference, “He is six feet high and I am five feet eleven inches,” are not comparison in the above strictly limited sense,—which I have called the psychological sense of comparison, because it does not seem to me really to form a logical species. Its differentia, if it were such a species, would be that it is guided by the unanalysed idea of identity and diversity. The analysis which this idea sets up transforms it into a general standard, and then the special correlation of the data is done away with. This is tested by the possibility of separating the judgment of identification into single judgments. It is nonsense to say (except elliptically) “I am of the same height,” but it is good sense to say “I am six feet high”. The second judgment refers to an explicit standard which replaces the accidental relation to a particular datum. The difference between the two judgments represents the point where comparison in the psychological sense passes into a disjunction of cases under a principle. The logical process is continuous, and is essentially comparison after this point as before. That we do not call it so is analogous to our counting only those terms as relative which go

together in pairs or threes, as "father and son," &c. We get off the track of a process or relation when it becomes general in its scope.

It is especially within the limits above assigned to comparison in the psychological sense, that the idea of reciprocal subsumption or apperception of each datum under or by the other *seems* to apply. I wish to raise the question how far this subsumption, and especially its reciprocal character, is anything but a characteristic of sense-perception and of imperfect knowledge. The logical purpose of the whole process, which must ultimately govern the comparing activity even as known to psychology, is surely to make the identity and diversity of the data explicit by subsuming them not under each other, but under some standard, quantitative perhaps, or else furnished by the notion of Kind or of Purpose. The subsumption of one under the other, or rather under an element in the other, is really the beginning of the subsumption of both under a principle. But, of course, in the effort to light on the principle we try elements first out of one datum and then out of the other, and we look or listen alternately, —chiefly because our sense is subject to time and space.

I will work out one or two examples. I have to match a particular fish-hook. I take my pattern, hold the one I am testing close beside it, and try if they coincide in length and curve; supposing that they do, then I judge the second the same as the first in these respects: I might say I subsume the length and curve of the second under those of the first—better, I equate the two. Then I recur to the first and examine the thickness of the steel, and again subsume the corresponding property of the second under this property. With reference to reciprocal subsumption, a remark must be made here. We are apt, in comparison, after one such subsumption as described above, to continue dwelling on the *second* object, to pass on to another property in *it*, and to make this a starting-point from which we return to the first to subsume the corresponding property of this first under this character in the second—like a ship which unloads one cargo and then takes another on board at the same port, so as not to make an empty return journey. This kind of alternation is, I think, a bad practice, and the source of confusion. It is better not to pass on to a further quality in the second datum, but to make an empty return journey and start again from a further quality in the first object; otherwise we risk confusing the first with the second object. But of course, at the end of the process, the second may still have superfluous qualities, and we must then take these as a datum and, finding nothing in the first to correspond with them, register them as a difference between the two. Apart from the erroneous tendency mentioned above, this is the only trace that I can find of *alternate* subsumption. But in as far as mastering the identity and diversity of the contents before us is a process in time, of course there is *successive* subsumption.

I will now take a couple of instances in which comparison in the psychological sense passes with unusual facility into logical

comparison, which is in fact simply inductive analysis. Here the suggestion of Identity and Diversity operates, but favourable conditions enable it to be transmuted almost at once into the suggestion of a pervading principle ; and the subsumption becomes subsumption under a property or principle, rather than under an unanalysed content. This is because the emphasis and repetition of certain attributes break through the shell of the particular examples at once and without effort : comparison in the psychological sense becomes a vanishing moment, and the pervading identity in all the data forces itself on our consciousness; *i.e.*, all the data are subsumed under one identity. There is a cage in the Zoological Gardens containing several kinds (six, I think) of hawk or falcon. I happened to see them fed, and was struck by the attitude which each of the six birds assumed, not attempting to begin its food at once, but putting one foot on it and looking round as if suspicious of an attack. So far as a first rough identification goes, the single judgment of perception not only started the comparison but completed it. But of course such an identification is a mere suggestion compared with real inductive analysis. For, to such analysis, it would not matter about the attitude being the *same* in the birds which I happened to observe—the data of my comparison in the psychological sense—but only what the attitude was, what it meant, and of what birds it was really characteristic. As regards the process of the comparison itself—comparison in the psychological sense—the account of it as alternate subsumption, or, as I have preferred to say, successive subsumption, is not excluded by the mere singleness of the perceptive judgment. We must admit that a judgment may be single, and yet contain parts which are also judgments. I make no doubt that within the continuous whole of the comprehensive perception, “all these birds, &c.,” there was a series of perceptive judgments in which the attitude of each bird was subsumed under that of some other, the latter being itself qualified and reinforced by reproduction of the attitude of those previously noticed. Only, in an example where the common attribute is so directly perceptible as it is in this, we find the logical content of identical perception dwarfing the particular instances and emerging as a characteristic or attribute within which the several instances find their distinct places.

Another case which I remember distinctly was the occasion of my first realising the typical appearance of implements of the stone age. I had previously seen only isolated and inferior specimens, and had felt perhaps a little sceptical as to their being the work of man's hands at all. But happening to enter the Blackmore Museum at Salisbury, where there were hundreds of excellent specimens arranged in gradation according to the fineness of their workmanship, I was of course at once enabled to recognise the identity of type pervading them. And I have no doubt that in such a graduated arrangement the appearance of the finer products of more marked shape and adaptation to their

purpose reinforces and interprets the ruder shapes ; or, using the same phraseology as before, we may say that the ruder shapes are subsumed under those whose import is more unmistakeable. That is to say, we notice the latter first, and then, when we look at the former, the latter are supplied by "redintegration," and so enable us to pick out the characteristic outline in the ruder form. That this process is a copious source of fallacy as well as of discovery (for a rude outline is often of ambiguous interpretation) only shows that it must be carried into detail with great care. It is obviously the unconscious rudiment of the Method of Concomitant Variations, which is only an application of the principle that Identity cannot exhibit itself except in Difference.

The problems of *degrees* of Difference and of Identity seem to me therefore to belong to logic and not to psychology. We are, as I believe, on the wrong track, if we try to refer these degrees to difficulty or delay experienced in the psychical process of making identifications or transitions. We can only speak of degree in reference to a standard, and this standard must be, I think, of the nature either of Quantity or of Kind. Under the head of Kind we may rank Purpose. If there is indiscernible identity on the one hand, or mere qualitative distinction on the other, then we have no question of degree. Two shades of green are more or less of the same ; but green and carmine would be, I presume (if pure, which no actual colour-sensation ever is), simply distinct, simply, that is, not the same, and no degree of difference can be assigned them as colour. Of course as light-stimuli they have a measurable relation.

It would follow that to ask as regards any two given terms whether there is more identity or difference between them, is a question entirely relative to the standard which we select. No identity, and no difference, has an absolute value. The nearest approach to such an absolute value is relation to a quantitative scale. *If* the two terms can be referred to places on a scale, which is exhaustive and of which the intervals are truly equal, then we *ipso facto* judge whether the units which the two terms have in common (their identity) or those by which the one exceeds the other (their difference) make the greater sum. But this is all. In *using* such a scale we use it for a purpose or for an effect (*e.g.*, in music and painting), and then the purpose or effect at once becomes the standard of identity and difference. We may say if we like that an aggregate of 100 sacks of corn compared with 49 sacks has more difference than identity. But if we only want 40, and are not bound or allowed to dispose of what we do not want, the two aggregates are identical for our purpose. Mill, in distinguishing analogy from induction (*Logic*, ii. 85), comes very near attempting to balance likenesses as such against differences as such in a way which is purely chimerical. We can make nothing out of asking how much likeness or difference there is between two terms. The only fruitful question is *what* the likenesses, &c., are, and *what* they prove.

## VI.—CRITICAL NOTICES.

*Scientific Theism.* By FRANCIS ELLINGWOOD ABBOT, Ph.D. London: Macmillan; Boston: Little & Brown, 1885. Pp. xxiii., 219.

This book formed a contribution to a discussion in the Concord Summer School of Philosophy on the question: 'Is Pantheism the legitimate outcome of modern science?' The Introduction (which contains in clear and concise form the argument of the first part of the present volume) appeared originally in MIND 28, under the title "Scientific Philosophy: a Theory of Human Knowledge". The author informs us in the Preface that, though the book was written in "five summer weeks," "it took five times five years to think it out. It is a mere *résumé* of a small portion of a comprehensive philosophical system." The impression left on the mind by a perusal of the book is precisely that which might be anticipated from this notice of its history. It bears evidence on every page that it is the outcome of patient and independent thought; but it also bears the mark of somewhat hurried production. There is, for example, an amount of repetition of identical phrases, which, though sometimes effective, becomes occasionally excessive; and the generally admirable clearness and precision of statement is not seldom marred by passages of an intricacy and technicality of terminology hardly to be met with outside of Kant.

The title expresses exactly the thesis of the book. It is an attempt to prove Theism by the scientific method, or rather by that method philosophised, *i.e.*, made conscious of its own presuppositions. The author believes that a "revolution" of modern philosophy is necessary in view of the existence of modern science. "To show what it is, and to what it leads in the sphere of religious belief, is the special object of my book." Philosophy, he thinks, has all along been on the wrong track: it must now take up the standpoint of science. What is needed is the "identification of philosophy and science". The "revolution" which the author desiderates is thus the reverse of the supposed Kantian revolution. This last he will not allow to have been worthy of the name. When Kant "founded the Critical Philosophy on this cardinal doctrine that 'things conform to cognition, not cognition to things,' and when he claimed thereby to have created a mighty revolution in philosophy comparable only with that of Copernicus in astronomy," he did not "really occupy a new philosophical standpoint, or really adopt a new philosophical method" (p. 3). The standpoint of Kant is really the standpoint of Nominalism. "He merely completed, organised and formulated the veritable revolution which was initiated in the latter half of the 11th cen-

tury by Roscellinus the Nominalist. . . . Nominalism distinctly anticipated the Critical Philosophy in referring the source of all general conceptions (and thereby of all human knowledge) not to the object alone or to the object and subject together, but to the subject alone; it distinctly anticipated the doctrine that 'things conform to cognition, not cognition to things'" (p. 3). Thus, through the influence of Kant, "all modern philosophy, by tacit agreement, rests upon the Nominalistic theory of universals" (p. 5). The principle of Association, for example, which rules "the English School" is only "one of the innumerable *aliases* by which Nominalism eludes detection at the bar of contemporary thought" (p. 5). And "the strength of Idealism" is "the strength of Nominalism—no more, no less" (p. 7).

In thus calling attention to the Nominalistic current in philosophical thought, and tracing it from its source to its latest issues, Mr. Abbot has done a real service. The justice of his complaint must also be allowed, that the significance of the Nominalistic principle has not hitherto been appreciated by the historians of philosophy. Farther, his detection of a Nominalistic vein in Kant is just and important. But when he proceeds to reduce Kant's entire work to a *mere* development of Nominalism, Mr. Abbot is evidently going beyond his record. It may be granted that Kant was himself a Nominalist, and that his Nominalism is the clue to much that he says of the 'object,' the 'thing-in-itself,' &c. But that the Critical Philosophy of which he is the founder is no more than the "logical development of Nominalism," that Kant was "anticipated" by Roscellinus, will not be admitted by anyone who understands Kant. The 'revolution' to which Kant laid claim was real and thorough-going. It was more than a "revival of Nominalism"; it was something new; and one is forced to infer, both from this general attitude and from several remarks on the subject, that Mr. Abbot has not appreciated its real significance. He confuses Critical or Transcendental with Psychological or Empirical Idealism. This confusion comes out in many passages: *e.g.*, "A consistent Idealist can claim to know no more than this—that there exist ideas in his consciousness" (p. 8). "The Idealist begins with his consciousness alone as the only certain or indubitable datum." "Knowledge itself . . . is confined to the series of changes that go on in consciousness" (p. 36). Accordingly, he speaks of Transcendentalists, equally with Psychological Idealists, as "phenomenalists". "The root of modern idealism, whether in its transcendental or experiential form, is the theory of *Phenomenism*—the theory that nothing can be known except 'phenomena,' and that all phenomena depend for their existence on individual human consciousness alone" (p. 71). And in its "advanced form" the theory of phenomenism is said to be "based on the Kantian philosophy". All this betrays a want of appreciation of the peculiarity or *novelty* of the Kantian position. Kant's *à priori* is identified with the old *à*

*a priori* of the advocates of 'innate ideas': his Critical Idealism with the Subjective Idealism of Berkeley. But the development of the Kantian position in the hands of Kant himself, as well as in those of his successors, is the proof that "phenomenism" is only incidental to his method. Knowledge, at the Transcendentalist's evaluation, is *real* knowledge—knowledge of the real—and Transcendentalism is just the explanation of the meaning of 'reality' in knowledge. Thus most of Mr. Abbot's polemic misses its aim as against Transcendentalism, inasmuch as it proceeds throughout on the assumption of that absolute dualism in knowledge which it is the work of Criticism to break down. He speaks, *e.g.*, of "the world outside of consciousness," though he is forced to admit that "whatever exists is intelligible". Nor is his criticism self-consistent. He conceives the Idealism of Kant, on the one hand, as subjective or individualistic Idealism, as a reduction of human knowledge "to the petty dimensions of individual self-consciousness . . . . valuable only as to the *a priori* constitution of the individual's own mind" (p. 9), and contends that, as such, its only logical issue is Egoism or Solipsism. "All sequent subjectivism abolishes the universal, and leaves only the individual, a solitary, unrelated, incomprehensible Ego" (p. 48). The answer to this line of attack is simply that the self-consciousness in which Kant finds the centre both of knowledge and of reality is not the individual but the universal self-consciousness—that his method is not empirical but transcendental. But Mr. Abbot has another view of the Kantian position, which intermingles curiously with that just referred to. On this view, the "Subjectivism" of Kant is in essence mere Sensationalism, "and it thus lands us ultimately in the scepticism of Hume" (p. 43). To this the sufficient answer is that the only escape from the "Subjectivism" which issued in Hume's scepticism is the objective or Critical standpoint of Kant.

The "revolution" which Mr. Abbot desires in philosophy is from the "subjective" to the "objective" standpoint. The latter is, he maintains, the standpoint of science. "All scientific investigations are founded on a theory diametrically opposed to that of Kant: namely, that things can be known, though incompletely known, as they are in themselves, and that cognition must conform itself to them, not they to it" (p. 14). "The time has come for philosophy to reverse the Roscellino-Kantian revolution" (p. 14). The scientific method "demands with increasing emphasis from philosophy a theory of knowledge that shall justify it in all eyes". The contradiction between philosophy, as hitherto pursued, and science is "absolute and insoluble". "The one is exclusively and narrowly subjective, . . . . the other is objective, in a sense so broad as to include the subjective within itself" (p. 11). "Science must be all a huge illusion, if philosophy is right; philosophy is a sick man's dream, if science is right" (p. 36). "The possibility of the one is the impossibility of the

other" (p. 49). Which it is that must surrender to the other, is obvious. For Science at any rate is not a mere "possibility"; it is a great reality. "Science is actual knowledge of a noumenal universe, and therefore refutes by its bare existence the phenomenism which denies the possibility of such knowledge" (p. 79). The theory implied in the scientific method "can be overthrown only by overthrowing the scientific method itself". That theory Mr. Abbot calls "Scientific Realism or Relationism," or the principle of the "objectivity of relations," as opposed to the philosophical "subjectivity of relations". In the concession and interpretation of this principle consists the required "revolution" in philosophy. For, this principle of "objectivity" once conceded by Philosophy, the foundation is taken from every "phenomenistic" theory. Just as the "necessary corollary" of Subjectivism is "the separability of phenomena and noumena," the "necessary corollary" of the Objectivism of science is "the inseparability of noumena and phenomena". The distinction becomes one of thought, not of reality; and "the only utility in retaining the distinction at all is to mark the distinction between complete and incomplete knowledge—noumena being taken to denote things-in-themselves as they *exist* in all the complexity of their objective attributes and relations, and phenomena being taken to denote these same things-in-themselves so far only as they are *known* in their objective attributes and relations" (p. 53).

This vindication of the objective standpoint of Science and this account of the real nature of the distinction between the noumenon and phenomenon are excellent. The principle of "Relationism," if properly understood, is undeniably true, and must supersede all merely "subjective" principles. We cannot believe in "a noumenal world" which possesses in itself "a non-relational or chaotic constitution," and which therefore must "remain for ever unintelligible *per se*". But, in order to be philosophically valuable, "Relationism" must be led up to by the pathway of Criticism. Philosophy cannot simply take up the standpoint of Science. The two cannot be "identified". For their attitude towards experience is different. Here again a more thorough appreciation of the meaning of Criticism would have saved the author from an extreme position. Criticism is the interpretation and theory of that Experience which Science simply takes for granted, not the invalidating of it in any respect essential to Science. Philosophy must analyse the ultimate fact of knowledge, and exhibit its inner constitution: it cannot, like Science, simply accept the fact in all its complexity. It is only by thus submitting the distinctions of scientific knowledge to philosophy that they can be overcome. The "Noumenism" of Science, for example, is not the final or philosophical Noumenism. It is said by Mr. Abbot to "repudiate the fundamental dualism" of Phenomenism, but it is only for the other dualism of Thought and Being, Things and Relations. *E.g.*, "it is the great merit of

the new Scientific Realism to treat things and relations as two totally distinct orders of objective reality, indissolubly united and mutually dependent, yet for all that utterly unlike in themselves" (p. 128). The theory is thus landed in hopeless contradiction. For we are told two pages further on that "it may be taken as a generally conceded truth that nothing is intelligible except relations," and again (p. 135) that "nothing is known of the universe *per se* except its immanent relational constitution". If these statements be true, they take us back to the standpoint of "Phenomenism," and we must still conceive the Noumenon as an 'unknown and unknowable' thing-in-itself behind phenomena. Such contradictions serve to carry home the lesson that the only way to arrive at a satisfactory theory of the Noumenon, or indeed of Knowledge as a whole, is by submitting to philosophical analysis the prime characteristic of Knowledge and of Reality alike, namely, *Relation*. Mr. Abbot has done well to seize upon this, and to signalise its supreme importance. But he has not realised its essential nature. He recognises indeed that "relations as such are the specific and only direct objects of the intellect or understanding" (p. 90). Yet he conceives of Knowledge as "an objective synthesis of real relations in a universe independent for its existence on human consciousness" (p. 80). But "relations" are not independent of consciousness, and if they constitute the world of knowledge, that world is no less dependent upon consciousness. Relation is thought or consciousness. Hence Mr. Abbot's position is virtually that of Idealism: and what prevents his realising this is the above-mentioned misconception of Idealism as a necessarily individualistic or even sensationalistic theory of knowledge.

It is on this philosophical foundation that Mr. Abbot builds his theistic argument. Its "corner-stone" he calls the principle of "the infinite intelligibility of the universe" which follows from its "immanent relational constitution". Now "that which either discovers or creates relational systems or constitutions" is intelligence. Therefore the universe itself, being "infinitely intelligible, must be likewise infinitely intelligent". "The intelligibility or relational system of the universe, considered as an effect, must originate in the intelligence or creative understanding of the universe, considered as a cause" (p. 151). "The universe *per se* is an infinite self-conscious intellect, which, though infinitely removed in degree, is yet essentially identical in kind with the human intellect. This result, then, is the constitutive principle of Scientific Theism; and I see no way to escape it, except by repudiating the scientific method itself" (p. 156). But a consideration of the nature of the universe leads to a closer definition of the theistic idea. Its characteristic feature is system; but a perfect system is an organism: therefore the universe must be conceived as an "infinite organism". This conception, again, leads to the true view of evolution. "It is shallow and poverty-struck

thinking which conceives that God is originally not infinite self-consciousness, but merely comes to a finite consciousness in men; and which thus fails to see that the evolution of the universe-object, as intelligible system, is explicable only by the universe-subject, as intelligent origin of that system or infinite creative understanding" (p. 168). Because the "infinite organism manifests infinite Wisdom, Power and Goodness, or thought, feeling and will in their infinite fulness, and because these three constitute the essential manifestations of personality, it must be conceived as Infinite Person, Absolute Spirit" (p. 209). The same inference is made from the principle of teleology, stated very well in the "strictly natural and purely organic" sense of "scientific philosophy," a sense, however, which is not "new," but as old as Aristotle.

While there is much that is valuable in this argument, yet, taken as a whole, it is a necessarily unsuccessful attempt to combine the heterogeneous notions of Organism and Self-consciousness. The author says that "the further question, whether this idea of God is Pantheism, is a question of the proper definition of the word": "it certainly holds that the All is God and God the All". There is no doubt that Mr. Abbot himself holds to the theistic position; but the question remains whether he has a right to it, while he retains a conception of the universe as a whole which is radically inconsistent with theism. Still, though we must demur to the general drift of the argument, it is only right to acknowledge the marked ability of certain parts of the discussion, as the remarks on the necessary function of "Anthropomorphism" in thought, the proof of the generic identity of all Intelligence, finite and infinite (p. 148), and the account of the true nature of the distinction between the "immanence" and "transcendence" of God (p. 213).

JAMES SETH.

*La Psychologie du Raisonnement. Recherches expérimentales par l'Hypnotisme.* Par A. BINET. Paris: F. Alcan, 1886. Pp. 171.

The fusion of mental pathology and mental physiology, to use Dr. Maudsley's terms, is proceeding apace in France. M. Binet's volume follows close on the trilogy in which Prof. Ribot has dealt so ably with the diseases of memory, of volition and of self-consciousness, and has been itself followed by Dr. Ballet's study on diseases of language. All these writers have the merits which we expect in natives of France: clear views clearly expressed, apt illustrations deftly applied, a march of argument admirably fitted both for exposition and persuasion. Whether they have not also the defects of these qualities,—chief among which may be named a certain impatience at residual phenomena which refuse to submit to their formulæ,—need not be here discussed. It is more to our purpose to recognise these merits in their full force in M.

Binet's present work. Nothing could be more trenchant than the manner in which he presents to his readers views which, if less novel in the country of Herbert Spencer than in his own, yet in their *ensemble* have never been so forcibly expressed on either side of the Channel.

The central position among these is held by the doctrine that perception and reasoning are practically one and the same mental process. This posited, any elucidation of perception will serve to clear up the psychology of reasoning, and it is such elucidation that M. Binet offers us. Readers of MIND will readily guess the sources whence he draws his light-giving materials. His studies in hallucination, and especially in hypnotic hallucination, have formed some of the most interesting psychological material that has recently been given to the world. Thus hallucination or false perception is to throw light on perception or veridical hallucination, and this in its turn is to elucidate reasoning, which, according to our author, is but perception long drawn out. The common term in all these is the "image," under which conveniently loose term our author includes all the elements of mind. For from the physiological point of view sensation and image vary only quantitatively: their local habitation is the same. And from the psychological they differ but intensively, so that we come at last to a practical identity of the two: "l'image est presque une sensation" (p. 128). It may be said at once that the weak point of M. Binet's argument is here. It is only by ignoring the sensational element in perception that he is enabled to draw so close a parallel between perception and reasoning.

But let us take his points more in order. After defining perception as a completion of impression by images of previous similar impressions, he has an interesting digression on the various degrees of prominence of different classes of images in individual minds. He distinguishes four types: (1) minds in which visual images play the leading part; (2) those in which auditory ones are predominant; (3) cases where motor representations are the favourite furniture of the mind; and (4) indifferents in which all three exert equal influence. This division of men into visuals, audiles, motiles and indifferents, as we may respectively call them, is of great interest and importance. This along with other individual differences may serve one day to throw light on what we may term psychologists' psychology. One example of difference of psychological theory due to difference in psychologists' minds is given by M. Binet. Stricker, a motile, declares that it is impossible to represent to ourselves other vowels while pronouncing any particular one, say *a*: he can only represent them as motor images which clash with the motor presentation. M. Paulhan, an audile, declares he can easily do what Stricker declares impossible, for he can represent the auditory images of *i* and *u* while the motor presentation of *a* is being presented. Psychologists need clearly to take account of their 'personal equation' as much as astronomers.

We next pass to a study of images generally, and here Mr. Galton's studies do M. Binet yeoman's service. He is thereby enabled to give the gradations from impression to after-image, from after-image to memory-image, and from this to generic image. But M. Binet is not content with merely repeating previous observers: he has much of interest to add from his own special work, and this part of the book is filled with interesting details which recall the days of Abercrombie and Carpenter and what we may style anecdotic psychology. Most of these anecdotes have been published before by M. Binet, but he now brings them to bear with considerable skill on the theory of perception. He claims that this has been considerably advanced by the study of hallucination, and this is of course a favourite thesis just now with Prof. Ribot and his followers. Yet it would be difficult to point to any specific point in which our knowledge of the normal processes in perception has been advanced by a study of its abnormal conditions. Of course these latter serve as excellent illustrations, and enable us to show the elements of a complex in separation or with differing intensity. But it is doubtful whether we should recognise that these were part of the same complex unless we had observed the fact under normal conditions. The appeal is rather from the abnormal to the normal than *vice versa*.

As a matter of fact in the case before us, the use of mental pathology seems to have confused rather than aided the study of the normal processes. What strikes one in hallucinations is the intolerable deal of imagination that clusters about the slightest scintilla of sensation. A few inequalities in a piece of cardboard are sufficient to form a *point d'appui* for a likeness of the hypnotised patient who projects it upon the cardboard at the suggestion of the experimenter. But, small as is the modicum of sensation needed, there is always some: the more uniform the cardboard, the less chance of the portrait being projected (p. 57). Again, in the experiments of M. Binet the *expérimentées* were hypnotised, or, in other words, their power of voluntary attention was dormant and that of involuntary attention was only capable of being centrally initiated by suggestion. But it is easy to see that, if only by a mere process of natural selection, an animal would learn to concentrate attention on the external sensation which came to it provided with local signs, and thus to subordinate the "images" which enable it to bring its former experience to bear on the presentation of the moment. In illusions and hallucinations the subordination is the other way. Thus, by looking at the subject from the point of view suggested by his hypnotic experiments, M. Binet is tempted to neglect the essential difference between the objectified sensation and the concomitant "images" and to leave out of account the action of attention. It is only by this means that he is able to assume the identification of perception and reasoning which forms the main thesis of his book.

This identification he symbolises in a very suggestive way.

We have the visual sensation of a book (A), and we find connected with it certain "images" of touch (C). We are enabled to have this, he says, because the sight of the book is associated by similarity with the image of previous sights of the book, A = B, and this image is identified with the sensation by a "law of fusion" which changes A = B into the synthesis (A = B), where the parentheses represent the fact of fusion. Now B or the image of the book has associated with it by contiguity certain tactile "images," B - C (where the dash represents the fact of association), and thus we are enabled to perceive that the book is smooth, which is symbolised by (A = B) - C. Just at present we need only remark that it seems a question-begging use of the word "perception" to apply it to the result of this process, which is rather a judgment. The perception consists surely in the process symbolised by M. Binet as (A = B), which, if it resembles a judgment at all, resembles what Lotze calls the impersonal judgment. And indeed the chief value of M. Binet's theory consists rather in this recognition of a synthetic process, his "law of fusion," though he leaves out of account the consideration of the question: What is it that fuses?

M. Binet then applies the same analysis and the same symbolism to the syllogism and is thus enabled to get an almost exact parallelism in the two processes thus:

<i>Perception.</i>	<i>Reasoning.</i>
(A = B)	B - C <i>i.e.</i> M - P
B - C	A = B <i>i.e.</i> S = M
(A = B) - C	(A = B) - C <i>i.e.</i> (S = M) - P.

Our author goes on to point out that Mr Spencer has given reasons for transposing the premisses, and, accepting this, the formulae for perception apply in every way to those of reasoning. Three images succeeding one another, the first raising the second by resemblance and the second suggesting the third by contiguity: this is the type both of perception and of reasoning. The force of simplification could no further go: but at what a cost has it been obtained! Much, if not most, of what is distinctive of the two processes has been ruthlessly lopped in order to procure the identification. Even waiving for the moment the point raised above, whether the process called "perception" by M. Binet has not been expanded into a judgment of which one term is a percept, all the objective reference in perception is left out of account. The localisation and projection of perception has nothing analogous in reasoning, and indeed the most marked difference between the two might be summed up in the externality of the one and the inwardness of the other. There must be a sensation in the former which should not be confused with image. Then again M. Binet owns that the middle term of the perceptive syllogism never enters into consciousness while it is explicit in logic. Language is necessary for reasoning; it does not enter into perception: this is only of secon-

dary importance, thinks M. Binet ; but that is solely because he has eliminated from his analysis attention which is involuntary in perception, voluntary in reasoning. We might compare the series of percepts to those "tapes" frequent in stockbrokers' offices, in which the winner of the Derby is followed by the price of consols, that again by the dividend of the Suez Canal, this by the prospects on the Home Rule Bill, that by the betting for the Oaks, and so on. The thought-series brings these items into connexion by doubling the tape so as to bring the betting on the Oaks in connexion with the winner of the Derby, the price of consols with the Home Rule Bill, and so on. It is this doubling, this active relationing of thought and reasoning, which constitutes the main difference in the two functions, and M. Binet has been unfortunate in choosing as his type of reasoning the syllogism which for logical purposes supposes all this psychological process of active relationing to be concluded and premisses to follow one another with mechanical regularity.

Taking all these divergences into consideration, we must hold that the proposed identification of perception and reasoning is illusory, nor can we look forward, with M. Binet, to any elucidation of the reasoning processes from the hallucinations of hypnotised patients (p. 140). It is true that for his identification he has the weighty authority of Mr Herbert Spencer, but under somewhat different circumstances. We are too apt to forget that the *Principles of Psychology* scarcely answers to its title, and deals rather with the principles of evolution as illustrated by the growth of mind. Mr Spencer's object is to prove that his familiar formula about homogeneity and indefiniteness and the rest applies to all the processes of mind. For this purpose he insists, and has perhaps the right to insist, on any point of resemblance which enables him to connect one mental process with another. Besides for philosophical purposes the law of parsimony comes into operation, and a philosopher is in the right to minimise his generalisations. But if psychology is to become a science, quite as much regard must be paid to the differences in the mental processes as to their similarities. The influence of the doctrine of evolution is particularly misleading in this connexion : its assumption of a gradual shading-off of one process into another gives too often encouragement to a somewhat slovenly identification of the two. However identical in germ, they have been differentiated in development. And when we ask by what principle they have been differentiated in the past we reach a fundamental difference of standpoint which may perhaps explain and excuse the polemical attitude here taken against M. Binet's book, admirable as it is in so many of its details, and indeed in its general conception, if we judge it merely from its own point of view. In a concluding passage M. Binet recognises that his exposition reduces mind to an association of images, the only activity recognised being that of the images. Though at times he gives a bare mention to Attention,

it plays no part in his exposition. We here reach what seems likely to be the *champ de bataille* in English psychology, now that Mr. Ward, in his article "Psychology" just contributed to the *Encyclopædia Britannica*, has posited with such insistence the claims of attention as the active principle of mind. We shall all soon have to select under which banner—Attention or Association—we shall fight: but the side we choose will probably be determined by one of those individual differences of attitude which met us at the beginning of M. Binet's book. As there are visuals, audiles and motiles among men, so there are some who can regard themselves as floating down the stream of their own consciousness, while others prefer to think that, notwithstanding the influence of wind and tide, they direct their own course. M. Binet, by his present work, seems to range himself with the former. But there is a passage in his book (p. 53) which indicates that he feels the weakness of his position: "Quand on a prononcé ce grand mot d'association on pense avoir tout dit. C'est un tort."

JOSEPH JACOBS.

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*Die Philosophie der Erlösung.* Von PHILIPP MAINLÄNDER. Zweite Auflage. Berlin: Theodor Hofmann, 1879. Pp. viii., 623.  
 (*Die Philosophie der Erlösung.* Zweiter Band.) *Zwölf philosophische Essays.* Von PHILIPP MAINLÄNDER. 5 Lieferungen. Frankfurt a. M.: C. Koenitzer, 1882-6. Pp. 655.

Ph. Mainländer was a disciple of Schopenhauer, who in a manner at once original and consistent with his master's principles had worked out a doctrine that may be regarded as the completed type of pessimism, when, in 1876, his early death occurred before the appearance, in that year, of his first volume, entitled *The Philosophy of Redemption*. His *Twelve Philosophical Essays*, of which the last was not published till the present year, were intended as a sequel to that work, and the volume which they fill bears the same title. As the two volumes are not only in name but in reality parts of a single work, it seemed desirable to wait for the completion of the *Essays* before any attempt was made to give a survey of the author's philosophical system.

This system, although it is especially deserving of the attention of those who are willing to face a philosophical argument ending with the proposition that "the knowledge that life is worthless is the flower of all human wisdom," is at present quite unknown in England. The best mode of exposition, therefore, will be to give first an outline of Mainländer's whole work, and then of his doctrine, unaccompanied by any criticism except such as is necessary in order to bring out its distinctive character.

Of the volumes that contain all we shall now have of Mainländer's philosophy, the first consists of *The Philosophy of Redemption* itself (pp. 1-358) together with an Appendix in which the author explains, by detailed criticism, his relation to Kant and

Schopenhauer, whom he regards as the two greatest of all philosophers. The division into "Theory of Knowledge," "Physics," "Æsthetics," "Ethics," "Politics" and "Metaphysics" is carried through both parts of this volume. The *Essays* that make up the second volume are arranged under two principal heads—"Realism and Idealism" (i.-vii.) and "Socialism" (viii.-x.). In the essays of the first group the relation of the author's system to Brahmanism, Buddhism and Christianity—the three pessimistic religions—is explained. The second group is followed by two essays entitled "Gleanings" (xi.) and "Critique of Hartmann's Philosophy of the Unconscious" (xii.). This last essay fills the whole of the fifth published Part of the volume. Its aim is to show that Hartmann is in error in returning to a pantheism that makes the whole world "a real unity"; the true direction of thought being to develop further Schopenhauer's doctrine of the *individual* will as thing-in-itself, which requires that the world should be regarded as only "a collective unity," no longer as the manifestation of a single will or spirit.

The later portions of Mainländer's work show no falling off, but on the contrary an increase in power. And, as might be expected, he finds it possible in a series of essays to say many things that could not be got within the more rigid framework of a systematic treatise. Following the *Essays* there was to have appeared an Autobiography; but instead of this there is now promised (as mentioned in the last number of *MIND*) a memoir of the author, by his sister, who has superintended the publication of the whole of the second volume. Those who have read any portion of his work will look forward with interest to the appearance of the promised *Lebensskizze*, for Mainländer is one of the writers who awaken the desire to know something more of their personality than can be gathered from their books alone.

Prof. Wundt, indeed, in his brief reference to *The Philosophy of Redemption* in *MIND*, Vol. ii. 510, seems to be of opinion that its interest is entirely that of an expression of personality; classing it among pessimistic speculations that are "guided more by feeling and temperament than by scientific method". This remark perhaps has reference to the absence of any elaborate attempt to balance pleasures and pains or to deduce the pessimistic conclusion from the negative character of pleasure. It may be contended, however, that this is an evidence of the author's profoundly philosophical conception of the question as to the worth of life. While Schopenhauer and Hartmann proceed by indirect methods, deductive or inductive, Mainländer puts the question directly as one that is to be solved by subjective reflection. Having arrived at his own conclusion, he appeals for confirmation to the philosophies of India. What was the result, he asks, when for the first time a philosophically trained class was able to escape from the struggle for existence and to gain complete leisure for contemplation? The result was necessarily the pessimism of the Brahmans. Now this is a powerful his-

torical argument. And if it is said that Mainländer's own pessimistic conclusion depends ultimately not on any argument of this kind but on temperament, it may be replied that any other conclusion depends on temperament in just the same way; that subjective reflection is in the end the only possible criterion of the worth or worthlessness of life. Apart from the view that may be taken of Mainländer's attempted proof of his pessimism, there does not seem to be any ground for the unfavourable inference that might be drawn from Prof. Wundt's incidental remark. The theoretical basis of the system, as a whole, cannot be said to show any want of rigorous logical connexion.

*The Philosophy of Redemption* opens with the unconciliatory announcement that the author has been the first to establish atheism scientifically. The doctrine that Mainländer calls atheism is a theory of the emanation of the universe from a "pre-mundane unity" that no longer exists. "God is dead, and his death was the life of the world." The atheistic character of this theory, as the author understands it, consists in its not admitting any "real unity" now existent "*in the world*," but only a "collective unity" of "real individuals". The individual beings that compose the world are not absolutely independent, but "semi-independent". Their connexion with one another and their being constrained as by an external power proceeds from their having once been parts of the pre-mundane unity. This connexion of things is, as it were, a "divine breath" blowing through the world from the "dead godhead". All things have their origin in what may be called anthropomorphically the "will" of the absolute being that existed before the world to annihilate itself,—an end which could only be attained by the "becoming" of actual existence. From the primitive act of the no longer existing unity springs the total movement or "fate of the world," which makes it as if the collective unity now alone existing were "a simple unity with a single movement" to annihilation.

The real beings that make up the world are "forces," manifesting themselves objectively in motion, subjectively as "individual wills". For Schopenhauer these were manifestations of a "will to live"; and it is true that in the animal kingdom, and still more in man, will has the appearance of being an effort to persist in a specific mode of life. In physics, too, the law of the "conservation of force" (*Erhaltung der Kraft*) is the expression of a will to live. But when we go deeper, the will to live is seen to be always "the phenomenon of the will to die". The more profound law of the "weakening of force" (*Schwächung der Kraft*) is still manifest, not only in molecular movements as viewed directly by physics, but in the cycles of animal and vegetable life. Again, in geology, it is manifest in the gradual dwarfing of all living forms. In the evolution of organisms, however, the will to die becomes more and more masked under the appearance of the will to live. Life, the means, has come to be preferred to death, the end.

Nevertheless, in the struggle of organisms to maintain them-

selves, the weakening of force becomes more and more rapid, and thus the ultimate end is more effectively promoted. This is seen especially in the history of human civilisation, under its forms of "social friction" and the growth of intellect. "Civilisation kills"; and by its universal diffusion the weakening of force will be carried to its limit. In philosophical reflection, which begins when civilisation is sufficiently advanced, the "will to die" again becomes conscious of itself. The will of the sage becomes identified with the movement of the whole world towards annihilation. He desires consciously the end to which all beings are impelled by a desire that is deeper than their desire for continued life. To this end, as has been seen, they move the more rapidly the more they seek to avoid it; for the putting forth of activity, by reason of the obstacles that resist it, only brings activity to an end the sooner. Yet it is destined that in all men the will to live shall at length disappear and give place to a full consciousness of the profounder will to die.

For this result, the attainment of an ideal State is necessary. There are, indeed, a few who can find redemption in any State; but the mass of mankind can only be redeemed in a State where education and leisure and possibilities of enjoyment are the common lot. To see the vanity of all things, they must first have experienced all things. It remains, therefore, in some sense a duty of those who have already discovered the worthlessness of existence to promote social reform, in order to hasten the advent of the ideal State; which, however, will inevitably arrive sooner or later, although the efforts of individuals may promote or retard it. When the ideal State has been attained, the emptiness of existence will fully reveal itself. Only one longing will now fill the heart—"to be struck for ever out of the great book of life," and, since a stationary state is impossible, this desire will be satisfied. The final description of the movement of human history as a whole, is therefore not "movement towards the ideal State," but "movement from being to not-being," and in it the movement of the whole world is consummated.

It will have been observed that much of Mainländer's cosmical system is the translation into subjective and at the same time highly abstract terms of real scientific generalisations. Sometimes he is even more in agreement with accepted science than he thinks. The law of "the weakening of force," for example, is placed by him in opposition to the law of "the conservation of force," as he supposes it to be understood by physicists. If for this last expression the more accurate expression "conservation of energy" is substituted, the law of the "degradation of energy" at once suggests itself as the physical analogue of Mainländer's "weakening of force". And some physical speculators, assuming, like Mainländer, a finite universe situated in infinite space, have shown how, according to the law of the degradation of energy, all the bodies in the universe must at length collect into a single mass from which all motion will have disappeared.

That such a state of "integration" as this is the absolute end does not, however, of necessity lead to the conclusion that it is a duty to promote this end. An optimist like Mr. Spencer may think it probable that "dissolution" (which comes to the same thing as a final "integration" so far as man is concerned), if not the end of the whole cosmical movement, is the end of each particular cycle; and may hold it a duty to co-operate with the evolutionary movement, in spite of its always being reversed. Yet, so far as the actual course of things is concerned, it is evident that Mainländer has just as good a case as the optimists.

As Mainländer himself sees, the dispute between the optimists and the pessimists must be decided, in the last resort, by a direct consideration of the ends and impulses of human nature. What he holds to be the answer of all the wise, when the question is brought upon this ground, we have already seen. In his own vivid phrase: "Life is hell, and the sweet still night of absolute death is the annihilation of hell". The deepest impulse of man, as of all other beings, is "the will to die," and the highest happiness attainable is in the thought of the cessation of existence. From this he draws the logical consequences. The promotion of social and political reform, although praiseworthy, is not an absolute duty. Those have greater merit who are impelled by pity for humanity to promote directly in others that "transformation and kindling of the will," by the knowledge that "not-being is better than being," which culminates, not in mere indifference to death but in "the love of death". And, finally, the solution of the problem rests with the individual. The highest virtue, therefore, is absolute chastity; for by it the individual, so far as he is concerned, solves the problem for the race. *The Philosophy of Redemption* does not command, but neither does it venture to condemn suicide. It is better, Mainländer says, to remain in life in order to help in the redemption of the rest of the human race; yet the sense of the worthlessness of life, and the longing for the repose of annihilation, may become too great for endurance (vol. i. 349-51; vol. ii. 218). All mankind, good and bad alike, are to be consoled by the knowledge that, for the individual, death is a final redemption. The philosopher who has dedicated himself to the service of truth alone cannot avoid the duty of proclaiming this.

Mainländer traces his pessimism not only to the religions and philosophies of India, but also, like Schopenhauer, to Christianity. "Pure knowledge," he says, "is not the contrary but the metamorphosis of faith." On the theoretical side, he connects his own philosophy most closely with Christianity. Brahmanism, because it asserts a unity "*in the world*," seems to him to be most in error. For this pantheistic doctrine makes individual beings, which alone are real, mere instruments of the All. Buddhism is in error too, in that it affirms, by its doctrine of Karma, "the omnipotence of the individual". This doctrine, however, although affirmed in a one-sided manner by Buddhism,

is at bottom perfectly true. For each individual being, when it was part of the no longer existing "transcendent sphere" of "simple unity—repose—freedom," willed all that now happens to it in the "immanent sphere" of "multiplicity—motion—necessity". In the reality of things, that is to say, nothing happens to any being in the world that has not been willed by that being. But Christianity expresses the truth that is in Buddhism while not excluding the truth that the pantheism of the Brahmins failed in its attempt to express. In making the individual only "half-independent" it recognises "the fate of the world," the "real relation" in which things stand to one another. That there is a constraint exercised on the individual will as if by an external power—which appears to the undisciplined mind now beneficent and now terrible—is the truth that is contained in all theism. The error is in attributing this constraint to a personal God existing "*beside* the world". This is the error of Judaism, but not of Christianity. The personal God of Christianity was in reality a concession to Jewish monotheism, as its doctrine of a future life was a concession to the insufficiently tamed Jewish vitality. "Esoteric Christianity" is atheistic; in a veiled form it teaches the doctrine of the self-annihilation of the godhead that existed "*before* the world": and the real reward of the Christian virtues is the "beatitude—felt as contrast through reflection—of not-being". This meaning of Christianity is developed in a remarkable essay on "The Doctrine of the Trinity" (vol. ii. 190-232). As characteristic examples of Mainländer's interpretations of Christian theology, it may be mentioned that in his view "the Holy Ghost is the way of God to not-being," and is identical on the one hand with "the fate of the world," on the other hand with "the Christian virtues" by which that fate is directly accelerated; while "Satan is the personified means to the end," "the wild struggle of individual wills".

Those to whom this seems mere paradox should read the essay; perhaps they will be rewarded by learning the secret of pessimism. Of one thing there can be no doubt; and that is, Mainländer's really strong sympathy with Christian theology and with the Christian view of life in what some may call its exaggerated, others its distinctive form. It is not to Catholic organisation that he is attracted, but rather to the mysticism and asceticism of the Middle Age, to Catholicism as a personal religion. Mixed with this kind of mediæval reaction there is a larger infusion than is to be met with in the ordinary mystic or ascetic of the "pity for humanity" characteristic of Christianity and Buddhism in their origin. It is this that gives Mainländer his sympathy with the revolutionary movements of modern times. Here, however, he makes a reservation in favour of German patriotism. A "cosmopolitan ideal" such as socialism is not to be pursued in the immediate future. It must be kept in view by those who aim at an ideal state; but in the meantime the first duty of the citizen is to be patriotic.

A rather obvious cause of pessimism is suggested by the passages in which Mainländer, while contending for the necessity of the burdens and restrictions imposed by the State, places them among the serious evils of life. It suggests itself that the pessimism of the Hindus was not really a discovery they made because they had leisure to see the vanity of things, but was due to their want of political freedom. This suggestion would find support in an appeal from India to Greece. Such a merely external cause as political circumstances, however, is not satisfactory as a final explanation. Pessimism must also have its internal cause. What kind of temperament is it, then, to which reflection seems to reveal nothing but "the intrinsic worthlessness of existence"?

It is remarkable that all systematic as distinguished from episodical pessimism, all pessimistic philosophy, is associated with a more or less strong Mediævalism. Some one may object that there is no mediæval reaction in Leopardi. To this the reply is that Leopardi was not a genuine pessimistic philosopher. The underlying philosophy of Leopardi is a certain combination of elements derived from ancient philosophy and culminating in the antique ideals of the individual and the State. His "pessimism" is really a sceptical despair of the realisation of these ideals; and at intervals (at least in the poems) it almost disappears. A genuine pessimist, besides, does not protest against Nature and Fate, but like the Buddhist and Christian saints (as Mainländer shows) holds himself to be in harmony with the tendencies of the sum of things when by "the slow suicide of asceticism" he seeks the only end that appears to him desirable. Mainländer's "esoteric Christianity" is really what he represents it to be—Christian asceticism made its own reward. He has simply given a well-compactated foundation, of the most modern materials, to what is essentially the mediæval view of life.

To point out its causes is not, of course, to refute Mainländer's pessimism. It may be that the Hindu philosophers and those modern Europeans who are most in sympathy with the Middle Age are those who have most successfully taken into themselves the results of the experience of large and complex societies continued through a long succession of years. What has been said is only intended as an aid to the statement of the question. The conflicting views of life, we now see, are, on the one hand, that for which the dictate of the highest wisdom is to suppress the personality, on the other hand, that for which to maintain the personality is the foundation of all virtue. And what their opponents should seek to establish against the pessimists is—not necessarily that the sum of pleasures in life is greater than the sum of pains; but that life, by moments, has a positive value, and that these are not the moments in which the personality is approaching extinction, but those in which it has the fullest consciousness of maintaining its own being.

T. WHITTAKER.

*Allgemeine Ethik.* Mit Bezugnahme auf die realen Lebensverhältnisse pragmatisch bearbeitet von JOSEPH W. NAHLOWSKY. Zweite, verbesserte und vermehrte Auflage. Leipzig: Veit & Co., 1885.

The aim of this work, which the author did not live to see published in its improved and enlarged form, is to bring the principles of Ethics into closer connexion than is commonly done with practical life, and to give equal prominence to its social and to its individual aspects. The standpoint is definitely and consistently Herbartian. The book brings out so clearly the peculiar Herbartian views of the connexion of Ethics with *Æsthetics*, and of its disconnection with Metaphysics, and it is so thorough in its attempt to show the practical application of the ideas elaborated, that it is worth while to draw attention to some of the leading features of the system expounded.

"The complete separation of practical philosophy from theoretical is," according to the author, "Herbart's great achievement." Metaphysics starts with the notions of experience, and the inherent contradictions in these notions require that they be manipulated and criticised. From this procedure, that of Ethics is doubly distinguished. In the first place, it starts with something certain—always and unchangeably valid—namely, the self-evident judgments of preference or the reverse pronounced upon the simplest relations of will. In the second place, it does not start with the real of experience, but with the ideal, which is entirely independent of experience. Ethics, the author thinks, is connected with metaphysics only by a "stiff-necked" generation, unwarmed by previous failure, and misled by the false idea that all departments of philosophy follow from one fundamental principle.

Yet if one considers the matter, perhaps it will appear that this dismemberment of philosophy is due to a peculiarity of the Herbartian metaphysics. The facts of human action and the ideals it aims at are excluded from metaphysical treatment by Herbart. But they are a part of that whole of experience which a more comprehensive metaphysics takes account of: even although they may not involve the contradictions implicit in the notions of experience with which Herbart starts. This leads to the element of arbitrariness almost in the author's other distinction between Ethics and Metaphysics. Herbart insists that the notions experience gives rise to—say, of space and time—require manipulation and transformation; while the ordinary notions of right and wrong are said to be clear and self-evident and to stand in need of no parallel process of sifting; and in the same way Nahrowsky affirms the invariability and universal validity of ethical ideas. No reference is made to the contradictions of the ordinary moral consciousness disclosed by a systematic elaboration of ethical notions such as that carried out by Prof. Sidgwick. This is the more to be regretted, as the greater portion of the

*Methods of Ethics* is occupied with the examination of an ethical theory which has many points of resemblance to that worked out by Nahrowsky.

The English "Intuitionists" claim universal validity for moral ideas, and defend the immediateness of the moral judgment in a way which closely resembles Herbart's. But they tend to an intellectual view of the moral consciousness which is alien to his, and to assimilate it to jural rather than æsthetic conceptions. This is perhaps the reason why the points of similarity between the ethical theory of Herbart and that of the English moralists have never been sufficiently emphasised. Trendelenburg indeed, in an interesting essay (*Historische Beiträge zur Philosophie*, iii. 122 ff.) points in this reference to Adam Smith's doctrine of the sympathy of a disinterested spectator as the criterion of a moral act, and to Hume's discussion of the relation between sentiment and reason. By means of the latter, Trendelenburg says, sympathy may be changed from a mere sensation as it was with Smith, into a conception of harmony such as we have in Herbart. But yet he concludes that "Herbart was the first for whom Taste was the practical law-giver," and that the fundamental notion of Herbart's Ethics—the idea that "practical philosophy is a part of æsthetics"—was original to him. Trendelenburg, however, does not go far enough back in tracing the descent of the ideas elaborated by Herbart. Smith and Hume were, in their views of morality, the lineal successors of Shaftesbury and Hutcheson, both of whom were dominated by the æsthetic conception of morality. In Hutcheson specially, and particularly in his early *Inquiry into the Original of our Ideas of Beauty and Virtue*, the perception of the morally good is expressly put on the same level as that of the beautiful or artistic, and the doctrine of the "moral sense" is explained in a way which gives it close affinities with the "judgment of taste" which is the Herbartian criterion both of beauty and moral good. The distinction between ethics and æsthetics (in the narrower sense) is indeed much more clearly drawn and moral principles generally more consecutively worked out in Herbart than in Hutcheson. Yet Herbart's fundamental view of the position of ethics might have been suggested to him by the earlier thinker.<sup>1</sup>

No clearer statement of the Herbartian position on this question could be wished than that given by Nahrowsky. Ethics and *Æsthetics* agree, he argues, in that both the beautiful and the moral please absolutely; in both too the satisfaction depends on the completed presentation of a certain relation of connected members; and both prescribe an ideal to be realised: hence they are both practical and have imperatives.

<sup>1</sup> Herbart refers to Hutcheson, *Werke*, viii. 242, but not in a way that implies knowledge of Hutcheson's writings at first hand. There may, however, be other references.

The datum with which *Æsthetics* starts is worth or value as determined by praise and blame, and the problem of the science is to define the essential in these determinations of worth, and to fix a final standard of the good and beautiful. These notions of good and beautiful are not relative or utilitarian, but their validity is "for all people and all time unchangeably the same". "The good is good in and through itself; the beautiful is in and through itself beautiful."

The æsthetic judgment is unique among mental phenomena. The predicate of the judgment of taste is not a notion but a mental condition—a sort of "inner resonance" which the subject-notion awakes in the mind. Further the æsthetic notion is not a relation of what is, but a practical decision as to value. It arises from the concurrence of thought and feeling. The understanding must make clear the subject of the judgment; feeling supplies the predicate. Again, the æsthetic judgment does not result from desire; for it is permanent whilst desire fluctuates.

The next question that arises is as to the subject of a fundamental æsthetic judgment. It cannot be a simple element of presentation, for the single colour or tone is aesthetically indifferent: it must be a relation. These æsthetic judgments neither need nor admit of proof. But it is only to the fundamental or root-judgments that certainty applies, while conflict among æsthetic judgments comes with complexity. In order then to get at a valid æsthetic judgment it is necessary to have a complete presentation of the object, to analyse it into its elements, and in thought to build it up again out of these elements; and it is further necessary to avoid the subjective tendencies, which, in the form of artists' or critics' individuality, lead to conflicting judgments.

What is said of *Æsthetics* holds of Ethics, "the most sublime of the arts". Ethics is distinguished from the wider sphere of *Æsthetics* in that it is concerned with the beautiful in willing (or in mind) only, and thus implies the notion of personality. This implies the further distinction that the value of the moral product belongs to the producer or agent, whereas the beautiful work of art becomes independent of the producer. Finally, æsthetic imperatives are hypothetical, those of morals categorical. Nahrowsky is undoubtedly right in pointing to personality as the fundamental notion through which morality becomes intelligible; and we may say, if we like, that the moral is the beautiful in willing, or in those habits of willing which have become consolidated into character. But this conception can only yield fruitful results, when the notion of personality has been analysed and its content exhibited.

Ethics, then, starts with unconditioned judgments of value upon volitional relations. Its object is the image of a definite volitional relation in pure objectivity. This gives rise to an immediate judgment of approval or disapproval; and to each

fundamental relation there corresponds a typical notion or practical idea.

The treatment of the original practical Ideas occupies the first book of the second part into which Nahrowsky's *Ethik* is divided. The second book of the same part works out in interesting detail the derived or social Ideas. The sole appropriateness of Herbart's five practical ideas is indicated in the following way. The definite individual will must either stand related to the generic image of a typical will, or to another individual will. In the former case we have the Idea of Inner or Moral Freedom; in the latter case, the second individual will may be determined quantitatively only—giving the Idea of Perfection—or it may be qualitatively definite as well. In this case, the second will may, however, not be an active will, but only a presentation—and here the Idea of Benevolence applies; or it may be active, and in this event the contact of the two wills may be either unintentional and indirect—whence the relation of conflict and Idea of Right—or it may be intentional and direct, from which results the need of recompense and Idea of Equity.

The Ideas do not seem to me to have, in the way that the Herbartian Ethics admits of their being treated, that fruitful application to morality which the author supposes. The first Idea arises (it is said) from the relation in which the will agrees with practical insight or conscience, and this relation pleases unconditionally. The Idea of Freedom, therefore, is the type of a will subordinated to conscience. Freedom here does not mean psychological or political freedom, but moral freedom: "he only is morally free who follows the best reasons, that is, reasons derived from moral types". So far the Idea remains contentless. The first determination of what is moral is through the Idea of Freedom. But Freedom means moral freedom; and the morally free man is made to mean simply the moral man, or the man who obeys his conscience. The practical judgment is thus reduced to a fundamental form in which it has unconditioned validity and necessity, but only the necessity and the validity which belong to the analytic judgment or "trifling proposition".

The difficulty of extracting moral content from the Herbartian Ideas is exhibited most clearly when we come to the fourth Idea, that of Right. This indeed may be regarded as the *crux* of the whole theory. There is a generality in the notions of Perfection and Benevolence which saves them from the peculiar difficulty belonging to the two-sided idea of Right. They may be affirmed dogmatically, by the assertion that the circumstances they apply to immediately please or displease, without it being shown how they necessarily belong to the moral consciousness. But, in the case of Conflict, the difficulty is not only in the assertion that it is immediately displeasing: although this assertion is not without difficulty, and Nahrowsky devotes considerable attention to it. There is the further difficulty involved that the "displeasing"

conflict can be surmounted in two opposite ways which are not morally indifferent. If the wills A and B are both fixed on an object X, which can only satisfy one of them, it is of little importance to say that the conflict between A and B is immediately displeasing or morally wrong. It might well be maintained that not the conflict as such is displeasing, but the action of A or of B—or, in some cases, of both—in contending for the object. At any rate, the important question for morals is, How is the wrong to be righted? What rules can be given for determining whether A or B ought to submit, and where mutual concessions are required? The imperative "Thou shalt not strive" requires many modifications before it can be accepted as ethically valid. It may be a small matter that it opposes the tradition which "approves all forms of competition"; but it has also to take account of the elements in the moral ideal recognised by the ordinary consciousness which are often only to be attained or retained by means of conflict.

Nahrowsky's classification of the "fundamental cases" of conflict does not seem to exhaust the logical—or actual—alternatives: but it is not necessary here to go beyond the alternatives he deals with. In discussing his first "fundamental case"—that in which the object of strife is necessary to the physical existence or moral ideal of one of the contending parties—his analysis of Right falls back upon the notion of Freedom. "An individual," it is said, "is obliged to limit the external use of his freedom so as to admit of others following out their ends as persons." But the Freedom here implied is something different from that which forms the first Idea. And the richer notion of Personality is introduced to give at once content to the conflicting wills, and a solution of the conflict. Here, however, it would seem to be not the conflict which displeases, but the violation of another personality. The notion on which all morality hinges is, therefore, just this notion of personality: a notion which more than any other is in need of metaphysical and historical explanation. Yet such explanation is disallowed in this connexion by the author's fundamental position as to the independence of ethical science.

Other cases of conflict can hardly be said to be so treated by the author as to show the application of the moral Idea of Right to the complex region of disputed claims to things and services. Nahrowsky's Idea of Right is a typical order of individuals of such a kind that strife between them shall permanently cease. But this ideal is only attainable, and is only intelligible, by means of rules whereby to estimate competing claims and thus give a principle for deciding conflicts.

W. R. SORLEY.

## VII.—NEW BOOKS.

[*These Notes (by various hands) do not exclude Critical Notices later on.*]

*Letters and Journals of W. Stanley Jevons.* Edited by his WIFE. London: Macmillan, 1886. Pp. xi., 473.

Mrs. Jevons has here done almost everything that was possible to make the inner life of her distinguished husband known to those who knew him before only as the logician and economist, and better known to those who knew him as a friend of somewhat reserved habit. The Journal which Jevons began to keep as a lad, with the earlier Letters in which he freely expanded to the members of his own family, gives all the information that could be desired as to the course of his mental development; and the Letters of his maturer time—commonplace as the occasion of most of them is—are so strung together, with simple directness, by the editor that they not only show the inmost nature of the man but serve also to mark clearly the stages of a career of rare intellectual activity, so sadly broken off in the middle. Though not more eventful than the life of professors commonly is, Jevons's yet included one episode of an unusual character that brings strongly into relief the call he had to the work of thinking. At the early age of 18, while prosecuting college-studies in physical (chiefly chemical) science, he was suddenly offered, and in his circumstances was induced not to refuse, a post as mint-assayer at the other side of the world, with the result that by the age of 20 he had a handsome and assured income with plenty of leisure for the scientific pursuits in which he took delight. The temptation to resign himself to practical life in such easy conditions would have been too much for an ordinary man, but Jevons never faltered in the determination to get back to pure study as soon as he had put by a little hoard of savings for use. A thoughtfulness already manifested in him as a boy had in the meantime been steadily deepening, till the conviction began to dawn upon him, with a curious confidence, that he was marked out to do original work in the way of applying scientific methods to problems of human nature. When five years had passed at Sydney he, accordingly, cut himself free, and, after seeing what he could of Australia and of South and North America on the way home, took his seat again on the benches of University College, at the age of 24, determined first of all to complete his education by working up the variety of literary as well as scientific subjects necessary for the London B.A. degree. His Latin and Greek did not however divert him from the thoughts with which he had already more than half convinced himself that he was destined to revolutionise the theory of political economy; and, when after a year his ambition widened towards the M.A. degree in the philosophical Branch III, the instinct of the logician next began to stir within him, passing almost immediately into consciousness of a special task of reconstruction in logical theory also. From the age of 27 his twofold path lay clearly defined before him, and during the years of production that followed he is seen alternately pursuing the one line or the other with consuming activity till overtaken by his sudden fate. The story of the previous years, as told in Journal or Letters, has a peculiar interest because of the perfect light that it throws on the limitations as well as the strength of Jevons's remarkable work in the world. Mrs. Jevons has added a chronological list of his various writings, smaller as well as greater. In case it has been overlooked, it may be well to note the omission of the short reply he made, in MIND,

Vol. vi. 284-7, to some strictures hazarded in these pages on the opening of his polemic against Mill's philosophy in 1878. Concerning this polemic, it is not unimportant for Jevons's credit now to learn that it was first begun as far back as 1868 (or in thought even earlier, see p. 225), and might have been carried through in Mill's lifetime if "the editor of one of the leading magazines" had not declined to publish the three articles first written.

*Historic Aspects of the A Priori Argument concerning the Being and Attributes of God.* Being four Lectures delivered in Edinburgh in November, 1884, on the Honyman-Gillespie Foundation, with Appendices and a Postscript. By JOHN GIBSON CAZENOVE, D.D., Sub-Dean and Chancellor of the Cathedral Church of St. Mary, Edinburgh. London : Macmillan, 1886. Pp. x., 150.

In these Lectures,—which are not altogether philosophical in tone (see, for example, p. 105, where we are told what is likely to be the sentence passed on Agnostics at the Day of Judgment),—an attempt is made to trace the history of "the *a priori* argument for the Being and Attributes of God," by which the author means chiefly the conclusion from the idea to the necessary existence of a perfect being, "suggested by Plato, re-stated by Augustine, and elaborated by Anselm". He is unable to decide whether Anselm may not have borrowed hints from Scotus Erigena, "but have been unwilling to acknowledge the obligation on account of the bad reputation of Scotus Erigena on the ground of orthodoxy"; "since in all ages many great and good men have held it lawful to be reticent concerning the source of some true and brilliant suggestion, if they have thought that mention of the work whence it was derived would either spread the knowledge of what might do mischief, or else prejudice hearers and readers against an argument which in itself was sound and valuable" (p. 52). The Anselmian argument, he concludes, had no widespread and acknowledged influence on theology until it was taken up by Descartes in *the early portion of the 16th century* (p. 55). Of those who have employed some form of *a priori* argument since Descartes, the chief writers discussed are Clarke and the late W. H. Gillespie, in whose honour the Lectureship held by the author was founded. The lectures themselves are followed by an "Appendix A" (pp. 99-129) in which (1) references are made to "schools of thought, or authors who do not seem to have attained to a true Theism," and (2) specimens are given from "authors who do appear to have grasped, as far as human understanding can, what is implied in the word God"; and an "Appendix B" (pp. 130-6) on necessary truths in science. After the Appendices comes a "Postscript" (pp. 137-44) on (1) Kant and the *a priori* argument, (2) "the alleged Pantheism of Plato," and (3) "the famous renegade from Judaism, Benedict Spinoza" (see p. 60). Lastly there is an "Addendum" (pp. 145-6) on "the force and practical authority of truths for which the proof falls short of absolute demonstration".

*Works of THOMAS HILL GREEN*, late Fellow of Balliol College and Whyte's Professor of Moral Philosophy in the University of Oxford. Edited by R. L. NETTLESHIP, Fellow of Balliol College, Oxford. Vol. II. *Philosophical Works*. London : Longmans, Green, 1886. Pp. xliv., 552.

Following vol. i., which brought together (see MIND, Vol. x. 461), with some small additions, all of Green's previously published philosophical writings except the *Prolegomena to Ethics*, the present volume consists of selections from his unpublished philosophical papers. "It was his practice, both as college-tutor and as professor, to write out and keep full notes for

most of his lectures. These were rewritten and amplified from time to time, and in some cases developed into tolerably finished compositions. In making selections from them it has been thought advisable not to include anything written before 1874, the date of the 'Introductions to Hume'. The earlier drafts, though by no means devoid of interest, are for the most part superseded by those which are here printed; and where this is not the case the more careful composition of the latter seems to show that they contained the writer's maturer views." As now presented, with great care, by the editor (who gives, at a length of xxxviii. pp., a most elaborate and serviceable analysis of contents), the selections fall under four heads: (1) Lectures on the Philosophy of Kant, pp. 2-155; (2) Lectures on Logic, pp. 158-306; (3) On the different senses of 'Freedom' as applied to Will and to the Moral Progress of Man, pp. 308-33; (4) Lectures on the Principles of Political Obligation, pp. 335-553. The lectures on Kant are about equally divided between topics of his general and of his ethical philosophy. The lectures on Logic deal first, shortly, with the position of the Formalists (chiefly Mansel), and then, at greater length (pp. 195-306), with the main topics of Mill's treatise. The discussion of 'Freedom' in Morality supplements what Green has elsewhere written on that subject. The remaining course of lectures, treating of the moral grounds upon which the State is based and obedience to the law of the State is justified, is partly critical and partly expository: it was to have been followed by a consideration of 'Social Virtues' and 'Moral Sentiments' that was never carried out. It will be evident, from this most general indication, what a range of thought more or less new the present volume offers to the critical survey of those who, from so many different sides, have shown themselves interested in Green as in few other workers of his time. The different parts of the volume will, it is hoped, all receive due appreciation in these pages.

*The Teacher's Handbook of Psychology.* On the Basis of "Outlines of Psychology". By JAMES SULLY, M.A., Lecturer on the Theory of Education in the College of Preceptors, London, &c. London: Longmans, Green, 1886. Pp. xvi, 509.

Mr. Sully's *Outlines of Psychology* (reviewed in *MIND*, Vol. ix. 314) included, according to its subtitle, a special reference to the "Theory of Education," but had more directly in view the requirements of general students. While these have not been deterred, by the amount of applied psychology which the book contained, from taking swift advantage of the theoretical instruction it brought them, it has been more difficult for teachers to make their way through so much general theory to an appropriation of the lessons which, they are now becoming more and more aware, psychological science has for them. For the special benefit of teachers, Mr. Sully has, accordingly, here aimed at "considerably reducing and simplifying the statement of scientific principles" in his *Outlines* "and expanding the practical applications". The labour has been far from small; for it has been no case of mere condensation but, at some places, involved a systematic recasting, with introduction of new chapters where stood mere sections before. The result appears to be a well-balanced manual of practical psychology, for which teachers cannot fail to thank the author. He will not be insensible of the rather obvious duty that now arises for him, with the *Outlines*, to the general student.

*A Handbook of the History of Philosophy.* For the Use of Students. By ERNEST BELFORT BAX. ("Bohn's Philosophical Library.") London: G. Bell & Sons, 1886. Pp. 419.

It cannot be said that Mr. Bax has succeeded, with this volume, in

filling the gap so long apparent in English philosophical literature. Schwegler's sketch of the history of philosophy, in spite of its undeniable merits (increased in Dr. J. H. Stirling's translation), does by no means satisfy the needs of the English student, and Mr. Bax was evidently not unaware of the opportunity he had when he deliberately elected to give, in a single handy volume, an original survey of the development of philosophical thought, instead of accepting the humbler task of re-editing for present use that other German manual—by Tennemann—which had been translated before Schwegler's. The result is not satisfactory. Mr. Bax has genuine philosophical interest and even enthusiasm, writes fluently and sometimes forcibly, and could not work over the ground to the extent that he has done without expending a great deal of labour; yet "students" cannot be advised to turn to his book. He is not nearly accurate enough for them in his facts, and he is terribly viewy. The viewiness (joined with a too magisterial assumption) cannot easily be illustrated here, but will immediately strike anyone who looks, in the interest of students, for the positive and balanced instruction expected of a *Handbook*. His accuracy may be gauged by what he tells us (p. 378) of James Mill as "in the direct line of the Scotch psychological school," which must be the same as that of which Reid (p. 201) is declared "the progenitor"; or (p. 203) of Thomas Brown as teaching Reid's philosophy; or (p. 211) of D'Holbach as having published the *Système de la Nature* "under the name of the elder Mirabeau" (!); or (p. 168) of Leibniz, who in 1663 went (for a session) to Jena, as there reading "Hobbes and Locke" (when Locke's *Essay* did not appear till 1690). Inaccuracies of this kind—and there are many more of them—are serious enough when "students" have not the knowledge with which to be able to discount them. (Errors of a still more obvious sort, inflicted in large numbers upon Mr. Bax by the carelessness of his printers, he has, we understand, taken measures to remove from all but the first impression of his book.) Great familiarity, at first hand, with the literature of philosophy is necessary before a man can hope to write a useful sketch of its history. It is a pity Mr. Bax was not content to revise Tennemann as far as Tennemann (in his day) went, and, having gained space by throwing out the more antiquated and useless of Tennemann's over-abundant references, to occupy it with a carefully written supplement, bringing the history, in a subdued business-like style, down to the present time. Students would then have been more in his debt than they are now likely to be, and between *Schwegler* and such a *Tennemann*, backed always by *Ueberweg*, have been able to do fairly well—till the time when some coming English historian of philosophy on the large scale may complete his work (like another Zeller) by writing, out of the fulness of knowledge, a compendium also.

*Natural Causes and Supernatural Seemings.* By HENRY MAUDSLEY, M.D., LL.D. London : Kegan Paul, Trench, 1886. Pp. 368.

"A plain scientific obligation," the author holds, lies on those who do not believe that there is any "accessible supernatural," "to explain the natural origin of human belief respecting that which is beyond the reach of human thought". The causes of belief in the supernatural are treated under the heads of "Fallacies incident to the Natural Operations of Sound Mind" (part i., pp. 7-145); "Unsound Mental Action" (part ii., pp. 149-261); and "The Attainment of Natural Knowledge by Divine Illumination" (part iii., pp. 265-353). All three parts are full of psychological interest independently of the main argument. The errors considered in part i. are first of all those that are due to purely intellectual causes, among which the author finds that the tendency of the mind to be

impressed more vividly by agreeing than by opposing instances is the most powerful ; after these, the errors due to feelings, such as wonder and desire, are considered ; finally, errors due to the unrestrained exercise of the imagination. Imagination is described as "the latest and highest outcome of the generative or productive energy or *nitus* of organic nature". Differing from the processes of observation and reasoning in being "quick, easy and pleasant" instead of "slow, toilsome and difficult," it is the source of fictions that take the place of facts and of theories that anticipate observation. Most of its products perish without result ; some grow into artistic works or into portions of the structure of science ; some take the form of unverifiable beliefs about the supernatural. Part ii. treats not only of the "mania and delusion" of actual insanity, but also of the "hallucinations and illusions," whether originating in the sensory or the higher centres, which form a sort of "penumbral region" between sanity and insanity. In part iii. are discussed the various kinds of "intuition" by which it has been supposed that insight is attained into the supernatural. These include "the intuition of the heart," "theological illumination" and "metaphysical illumination" (the "ecstasy" of the Neo-Platonists, &c.). As the physical basis of the creative imagination is conjectured to be the formation of "new nerve-junctions," the physical basis of ecstasy is found in the exaggerated activity of nerve-centres disconnected temporarily from the rest. Certain nervous tracts "stand out"—as is indicated by the word itself, "ἐκστασις,"—"in their special activity rapt into a delirium of function" (p. 331.) From this striking explanation of certain pathological states, it is inferred that "theologian and philosopher alike exhibit the strained functions of a sort of *psycholepsy*" (p. 351). All "speculative philosophy" is condemned as the straining of a mental function "beyond the reach and need of a correlate in external nature". "Genuine knowledge . . . represents the formation of a complete and fit circuit between the individual and nature. . . . There is an incompleteness or break of circuit when the mutual adaptation is inadequate or interrupted, which is probably the condition of the occurrence of consciousness. . . . What else, then, is transcendent metaphysical thought and feeling"—being an exaggeration of consciousness—"but the designed and methodical culture of a break of circuit and the pernicious negation of the true method of knowledge?" Here, and especially in the parenthetical remark that "if the circuit were complete and fit in every particular, there would be full unity of man and nature, and no consciousness," the author seems, by force of reaction from "metaphysics," to suggest as an ideal a state not so much unlike the mystical "absorption," which, although the product of "isolation" instead of "complete circuit," equally had unconsciousness for its term. In this whole passage (pp. 351-3) as well as others, Dr. Maudsley appears, not for the first time, in the character of the *Méthaphysicien malgré lui*.

*Constructive Ethics. A Review of Modern Moral Philosophy in its Three Stages of Interpretation, Criticism and Reconstruction.* By W. L. COURTEY, M.A., LL.D., Fellow of New College, Oxford, Author of "The Metaphysics of John Stuart Mill" and "Studies in Philosophy". London : Chapman & Hall, 1886. Pp. xvi., 318.

This book is "intended as an Introduction to a systematic effort to work out a System of Ethics" which at "some time in the future" the author hopes to be able to accomplish. In his "theoretical" part (i., pp. 1-52) he sets out to show that in ethics as in metaphysics there can be no "properly constructed system" except "on the foundation of Absolute Idealism". Three kinds of ethical systems, the "interpretative," the

"critical," and the "reconstructive," are found to succeed one another in the history of speculation ; these, accordingly, form the subject of the three books of the "historical" part (ii., pp. 55-318). Since "the law of obligation" is "at once the central conception of ethics" and "in itself an essentially metaphysical principle," as every principle must be that can lay any valid claim to serve as a foundation of ethics, moral systems may be divided into "(1) Those which give no explanation of moral obligation, (2) Those which give some explanation, satisfactory or unsatisfactory" (p. 71). In the first class come Materialism and Mysticism. The second class includes Egoism, Sentimental Altruism, Utilitarianism, Rationalism, and Evolutionistic Ethics. The members of this class are dealt with under the heads, already mentioned, of "Interpretation," "Criticism," and "Reconstruction". The "interpretative" systems that form the subject of bk. i. (pp. 55-131) are "Egoism" (Hobbes), "Sentimental Altruism" (Adam Smith, Hutcheson, &c.), the system of "Conscience" (Butler), and "Early Rationalism" (Clarke, Price, &c.). Book ii. ("Criticism," pp. 135-164) treats of Utilitarianism, "early" (Hartley, Paley, Bentham, &c.), and "later" (James Mill, Austin, J. S. Mill). "The age of criticism," it is said, "is one of lassitude in creative effort : an age of provisional hypotheses and intellectual suspense." Thus it was that following the first systems, characterised as various "modes of interpreting the moral data," came "the critical systems of a crude and disappointing utilitarianism". Although in theoretical philosophy "criticism is concentrated in the critiques of Kant," yet "the rationalism of Kantian ethics begins the function of reconstruction" (p. 3). Kant therefore is the subject of ch. i. of bk. iii. ("Reconstruction," pp. 167-318). The remaining chapters deal with "The Successors of Kant," "Scientific Theories" (Spencer, Stephen, &c.) and "Pessimism". Rationalistic ethics, as well as metaphysics, is found to culminate in the doctrine of Hegel. "The Ethics of Evolution" is "the lineal descendant of Utilitarianism," but it "ruthlessly lays hands on its natural parent". "Just as the psychology of Spencer and Lewes has taken the place of the individualistic psychology of Locke and Hume and Mill, with its larger notions of race-experience and its wider faith in time, so, too, has the ethics of evolution in reality destroyed the narrow Utilitarianism of Bentham and Austin and James Mill, with its fuller views of the development of conduct and the genesis of the moral consciousness" (p. 242). The author's conclusion as to the doctrines of "Scientific Ethics" is, however, very much like that which he arrives at afterwards as to the ethical doctrines of Schopenhauer and Hartmann, these being condemned as "only partially reconstructive and of purely transitional value" (p. 318). "The magnificent postulate which Hegelianism involves," and that alone, can give us a satisfactory Constructive Ethics (p. 227).

*The Principles of Morals* (Introductory Chapters). By JOHN MATTHIAS WILSON, B.D., Late President of Corpus Christi College, and Whyte's Professor of Moral Philosophy in the University of Oxford, and THOMAS FOWLER, M.A., President of Corpus Christi College, and Wykeham Professor of Logic in the University of Oxford, Honorary Doctor of Laws in the University of Edinburgh. Oxford : Clarendon Press, 1886. Pp. vii., 133.

The three chapters of this book are the introduction to a work (to be called *The Principles of Morals*) planned, many years ago, by the joint authors, and in part written, but broken off by Prof. Fowler on his colleague's death. Pending the completion of the work, which he has not yet been able to undertake, Prof. Fowler thinks the publication of the present chapters "may be of some service to students as affording an introduction

to Moral Philosophy and containing a brief sketch of the leading English Moralists". "There is the additional reason," he adds, "for publishing these chapters in a separate form, that they alone received Prof. Wilson's final *imprimatur*. Should the remaining chapters ever appear, though they will contain many of Mr. Wilson's ideas, expressed, at times, in his own language, the responsibility for the opinions adopted in them will rest mainly with me." Ch. i. (pp. 1-22) is on the definition and divisions of Moral Philosophy, and on its relation to other sciences and to religion. Ch. iii. (pp. 114-133) on the "Method of Morals". Ch. ii. is a "Review of the earlier English Moralists" from Hobbes to Bentham. Hobbes is criticised on the ground that his system is "unhistorical". By the distinction of ethics and politics, discussed in ch. i., both Hobbes and Bentham are defended, on the ground that they aimed at constructing a political rather than an ethical system, from the strictures of those who object that they do not take sufficient account of the higher ethical emotions. "The speculations of Hobbes," it is said, "created English Moral Philosophy by antagonism" (p. 35). As representatives of the two lines of speculation, that of rationalism and that of "moral sense," "conscience" or "sympathy," which sprang from reaction against Hobbes, the systems of Cudworth and Clarke, Hutcheson, Butler, Hume, Adam Smith and Price are selected for special exposition. Hume receives the praise of having "reduced to order and symmetry all the elements of moral theory existing in his time" besides making advances on his predecessors (p. 61). A section on Kant is interpolated because his system is closely akin to English rationalism, especially to the system of Price. Having hitherto considered writers who "admit, though presenting many minor differences, of being ranged under two heads," the authors next proceed to notice some of those who cannot be classified strictly under either head; selecting for exposition Mandeville, Hartley, Locke, Tucker, Paley and Bentham. The general conclusion of the historical chapter is that the writers noticed "all called attention to important aspects of the subject, and erred not so much in positive misstatement as in the omission of some essential consideration. Thus, Hobbes drew special attention to the action of law in modifying conduct and to the strength of the self-regarding feelings; Shaftesbury, Hutcheson and Butler to the existence of the benevolent and more distinctively moral side of human nature; Mandeville to what may be called the semi-social feelings; Hartley to the influence of association in the formation of our more complex states of mind, and Bentham to the necessity of an external test of actions" (p. 113). The Method of Morals, it is concluded in the last chapter, must be *a posteriori* as opposed to *a priori*. Further, it must be historical: for morality is progressive; and it is by the historical method of study that we can best learn to make improvements in inherited morality.

*The Philosophy of Art. An Introduction to the Scientific Study of Ästhetics.* By HEGEL and C. L. MICHELET. Translated from the German by W. HASTIE, B.D. Edinburgh: Oliver & Boyd, 1886. Pp. xv, 118.

A translation of Hegel's Introduction to the *Ästhetik* (pp. 1-46) and of Michelet's Summary of Hegel's Philosophy of Art (pp. 49-118). In his preface the translator enthusiastically commends Hegel's teaching to the attention of English artists.

*The World as Will and Idea.* By ARTHUR SCHOPENHAUER. Translated from the German by R. B. HALDANE, M.A., and J. KEMP, M.A. Vols. II., III. London: Trübner, 1886. Pp. viii., 496; viii., 509.

With these handsome volumes (xxiii., xxiv. of the "English and Foreign Philosophical Library"), the translators complete their arduous task begun in 1883. Vol. i. then published contained a short statement (see MIND,

Vol. ix. 156) of the scope and method of their undertaking, and they are now to be heartily congratulated upon the execution. Some defects or slips that could be noted in their first volume have been made good, and the remainder of the work, in the final form it assumed at Schopenhauer's hands, appears (upon an examination of passages selected at random) to have been rendered with as much care in detail as intelligent grasp generally. If Schopenhauer—as he was slow in obtaining recognition from his countrymen during his lifetime—has had to wait a quarter of a century from his death for his English public, he has at least been fortunate in securing translators able and determined to do his remarkable qualities justice. Vol. ii. begins with the striking "Criticism of the Kantian Philosophy" which (in less developed form) was added as Appendix to his work as it originally appeared in 1819; and from p. 163 follow the "Supplements," which, first added in 1844 and increased in 1859, are a continuous product of his ripest thought rather than a mere elucidation of his earlier ideas (as their name and parallel construction would seem to import). Besides providing a useful and much-needed Index (with the help of the devoted Frauenstädt's *Schopenhauer-Lexikon*) the translators, according to their formerly announced plan, have given at the end an Abstract (pp. 477-86) of the early (1813) dissertation *On the Fourfold Root, &c.*, which laid out the main lines of all Schopenhauer's later thought. What else he thought necessary to be added to the systematic exposition of his philosophy is to be found in the *Paralipomena* of 1851 (published with the *Parerga*).

*Autobiography of Friedrich Fröbel.* Translated and Annotated by EMILIE MICHAELIS and H. KEATLEY MOORE, Mus. Bac., B.A. London: Swan Sonnenschein, 1886. Pp. 144.

The different pieces here brought together, all bearing on the life and labours of the founder of the Kindergarten system, are issued by the translators as some kind of substitute for a rendering of Froebel's chief work *Die Menschenerziehung*, which they had proposed to undertake for the English Froebel Society, on occasion of the centenary of the master's birth in 1882, but appear not to have been encouraged to carry through. Their common enthusiasm for the cause and their helpful difference of nationality have enabled them to reproduce Froebel's ideas and words in a thoroughly trustworthy form. The main autobiographical piece (pp. 3-101), consisting of an unfinished letter addressed to the Duke of Meiningen in 1827, should be full of interest for all those who wish to understand the strange mixture of mystical feeling and somewhat perplexed intelligence with practical good sense in the nature of the great educational reformer. To this piece are added, by way of supplement, a shorter account of his life included by Froebel in a letter (1828) to the philosopher Krause; a sketch, entitled "Critical Moments in the Froebel Community," by his adherent Barop, writing by way of reminiscence about the year 1862; and finally a full chronological abstract of the principal events both in the life of Froebel and in the development of the Kindergarten movement, abroad or in England, down to the present time.

*Lectures on the Diagnosis of Diseases of the Brain.* Delivered at University College Hospital. By W. R. GOWERS, M.D., F.R.C.P., Assistant-Professor of Clinical Medicine in University College, &c. London: J. & A. Churchill, 1885. Pp. vii., 246.

These Lectures (which serve to complement the author's earlier *Diagnosis of Diseases of the Spinal Cord*) have been recognised as one of the best recent products of the English neurological school, and should be carefully noted by psychologists that are concerned to get trustworthy information

as to the present state of cerebral pathology. They are marked by great clearness of statement and independence of judgment. We hope for an opportunity, later on, of drawing more particular attention to some points in those of the lectures (such as x., "Affections of Speech") where the author trenches more directly upon psychology.

*Kant's Ethics. A Critical Exposition.* By NOAH PORTER, President of Yale College. ("Griggs's Philosophical Classics.") Chicago : S. C. Griggs, 1886. Pp. xviii., 249.

The chapters of this essay on Kant's ethics are, after a short Introduction, (i.) Principal Ethical Treatises, (ii.) *The Fundamental Principles of the Metaphysics of Morals*, (iii.) *The Critique of the Practical Reason*, (iv.) A Critical Survey of Kant's Ethical Theory, (v.) Brief Notices from a few of Kant's German Critics (Schiller, Trendelenburg and Lotze). The line the author takes in the critical part of his work is to urge, against the purely formal character of the Kantian ethics, that under the title of "fitness to be a universal law of nature" Kant really makes use of the criterion of "tendency to promote the general welfare". A "rational nature," if it is absolutely insensitive, cannot be an end to itself. "Worth and value are terms which can have no import unless the emotions are appealed to." Butler's "principle of reflection" is compared with the doctrine of the practical reason and is preferred to it because, although not sufficiently based in analysis, it is yet founded on a doctrine of human nature, and not, like the Kantian doctrine, put forward as applicable to "all rational beings" without any reference to the special constitution of man (pp. 186-9). "Our solution holds fast to the authority of the moral reason and the moral law, as recognised by both Kant and Butler. So far as Butler recognises simple authority as the distinctive attribute of the moral reason or the moral nature in the way of personification, without any explanation of the natural endowments which make it possible, so far he is fairly open to criticism. So far as he resolves the possession and use of this authority into the nature of man as a reflective and voluntary being, so far does he make his theory rational" (pp. 205-6).

*German Psychology of To-day.* By TH. RIBOT, Director of the *Revue Philosophique*. Translated from the 2nd French Edition by JAMES MARK BALDWIN, B.A., late Fellow of Princeton College; with a Preface by JAMES M'COSH, D.D., LL.D., Lit.D. New York : C. Scribner's Sons, 1886. Pp. xxi., 307.

A welcome translation, by a competent and careful hand, of Prof. Ribot's well-known work. The task of translating "was undertaken with the feeling that no greater service of the kind could be rendered to the 'new psychology'". Dr. M'Cosh, in a Preface of 8 pp., says first a useful word or two for the introspective method as fundamental in psychology—useful because of a certain exaggeration in some of the author's statements that follow; and then makes some interesting remarks on the supplementary (physiological) method. ("Herbart of *Lepsic*" must be a slip of the pen for Königsberg or Göttingen—if local designation were necessary.)

*Étude sur le Scepticisme de Pascal considéré dans le Livre des Pensées.* Par ÉDOUARD DROZ, Docteur ès Lettres, Maître de Conférences à la Faculté des Lettres de Besançon. Paris : F. Alcan, 1886. Pp. 394.

The author's object is to oppose the view of Pascal's *Pensées* which he takes to be the prevalent one among the educated public, *viz.*, the view derived from Cousin and summed up in the phrase—"the scepticism of

Pascal". Pascal, he contends, was a sceptic only in appearance. The appearance of scepticism was produced by his taking in his *Apology* the line of appealing to the heart rather than the intellect. To make the ground clear for this appeal, he balances one philosophical doctrine against another, "dogmatism," for example, against "scepticism," showing that it is impossible to decide on rational grounds for either ; and, in general, he tries to bring out the mutual contradictions of philosophical systems. With respect to philosophy, therefore, he might be called a sceptic ; but he is not to be placed among the philosophers, but among the Christian saints, or, if the term is preferred, mystics ; and his "sceptical" method is one that had been employed before, in particular by the Fathers of the Church. He makes use of this method because his aim, like theirs, is not simply to furnish a proof of religion, but to convert unbelievers. It is an error to suppose, as Lange does, that from being a philosophical sceptic he became a believer in revealed religion on grounds of faith ; that, as has been frequently represented, he was a kind of "Romantic" of the 17th century, who, to escape doubt, threw himself upon faith by a movement of reaction. On the contrary, his philosophical "scepticism" was really the result of an increased intensity of faith. He at first accepted the philosophical proofs of religion, but afterwards came to hold demonstration in contempt as compared with appeals to the heart and to the will. And the doctrine of Pascal is no more sceptical than his method is in reality. For, while he rejects equally "scepticism" and "dogmatism," the scepticism he rejects is the true scepticism, but the dogmatism he rejects is the false dogmatism,—the dogmatism, namely, of philosophical systems that undertake to prove independently what can only be accepted as revealed.

*Philosophie de Stuart Mill.* Par HENRI LAURET, Professeur agrégé de Philosophie, Docteur ès Lettres. Paris: F. Alcan, 1886. Pp. 448.

This book on the philosophy of J. S. Mill is divided into an expository part (pp. 17-260) in four chapters, entitled "Psychology," "Logic," "Morals," "Idealist Positivism and Humanitarian Religion"; and a critical part (pp. 263-445), of which the first four chapters deal with the subjects of the exposition in the same order, while ch. v. furnishes a general conclusion. The substance of the criticism of Mill's psychology and logic is that he recognises no activity of the *Ego*. For the rest, he is neither a consistent nominalist nor empiricist. No consistently empiricist logic, indeed, is possible ; for "consequent empiricism" is "the anarchy of thought" (p. 322). But it is in his treatment of questions of morals and religion that Mill is most inconsistent. Here his aspirations are always opposed to the doctrines he professes (p. 375). His great merit, apart from his work in the theory of politics and in political economy, is to have constructed a "philosophy of association" when before him there was only a "psychology of association". "In spite of the insufficiency of associationism," the author concludes, "Stuart Mill will remain as an illustrious representative of contemporary empiricism, which will have the honour of having enriched the *philosophia perennis* with two new data—Habit and Heredity."

*La Peur. Étude psycho-physiologique* par A. MOSSO, Professeur à l'Université de Turin. Traduit de l'Italien par FÉLIX HÉNNENT, Membre du Conseil supérieur de l'Instruction publique. Avec figures dans le texte. Paris: F. Alcan, 1886. Pp. 179.

This translation, from (already) the third Edition of Prof. Mosso's *La Paura* (see *MIND*, vol. x. 619), should give still wider currency to the very brightly written and interesting book of an original scientific investigator.

*L'Alternative.* Contribution à la Psychologie par EDMUND R. CLAY, traduit de l'Anglais par A. BURDEAU. Paris: F. Alcan, 1886. Pp. xx, 650.

*The Alternative*, published anonymously in England in 1882 (reviewed at length in *MIND*, Vol. viii. 109), has now in this French translation the author's name attached to it. The translator, in an Introduction of xvi. pp., gives a sympathetic exposition of the main ideas and object of the work, but tells nothing new of the author beyond his name. M. Ravaillon appears to have been struck by the work, for it was he that counselled the translation.

*Le Langage intérieur et les diverses Formes de l'Aphasie.* Par GILBERT BALLET, Professeur agrégé à la Faculté de Médecine de Paris, Médecin des Hôpitaux. Paris: F. Alcan, 1886. Pp. xvi, 174.

We hope to return to this work, which, coming from a medical man, has a special significance in so frankly recognising the necessity of interpreting the facts of cerebral pathology by the results of properly psychological analysis. The complementary relation of the one to the other could not be better or more intelligently put than in the author's Introduction, where his task is thus described: "Montrer les résultats de cette heureuse entente de la psychologie et de la pathologie, faire ressortir les éclaircissements que la clinique apporte à l'étude de la fonction du langage, rechercher surtout les interprétations des diverses formes de l'aphasie, telles que les rend possibles l'analyse psychologique, tel est, si nous ne trompons, l'effort qu'on attend de nous". This purpose he appears to have very effectively carried out within the short compass of his work; though, written as it was with a view to 'aggregation' in medicine, both subject and title of it were set to him rather than chosen by him.

*Science et Philosophie.* Par M. BERTHELOT, Sénateur, Membre de l'Institut. Paris: Calmann Lévy, 1886. Pp. xv., 492.

This volume consists of articles contributed to various journals by the distinguished chemist during the last thirty years, and constitutes "a sort of intellectual and moral biography of the author". The articles fall into four principal groups: Scientific Philosophy; History of Science; Public Instruction; Politics and National Defence. The last two groups include a description of the University of Geneva, with special reference to scientific instruction (pp. 321-50), and an account of some of the efforts made during the siege of Paris by the Scientific Committee of Defence, of which the author was president, to devise new methods of communication by electricity and otherwise (pp. 416-90). In an article on the scientific relations of France and Germany (pp. 351-63), intended as a protest against the introduction of national antipathies into science, M. Berthelot points out incidentally that, contrary to the opinion that is generally formed of the German genius, the part of the Germans in the establishment of the law of chemical equivalents has been above all experimental and practical. "On the contrary, the atomic theory properly so-called, of a more abstract and contestable character, is due to an Englishman, Dalton; whilst its demonstration by the physical study of gases has been given by a Frenchman, Gay-Lussac." The genius of the European races, therefore, is not so different as some wish to make out (p. 356). Under the head of history of science comes an account of the Academy of Sciences from its foundation, under the First Republic, to the present time (pp. 185-214), followed by obituary notices of Balard, Victor Regnault, H. Sainte-Claire Deville, and Adolphe Wurtz; and further supplemented by sketches of the history of explosives and of the origin of alchemy, both of which subjects have

been treated by the author in larger works. As contributions to the philosophy of science the most notable articles are those that are placed at the beginning of the volume, on Ideal Science and Positive Science (pp. 1-40) and on Synthesis in Organic Chemistry (pp. 41-96). In the first of these the author argues that what metaphysical systems have always done has been to arrive again by a pretended deduction from *a priori* principles at the positive knowledge of their time, filling up its lacunæ by imaginative construction; that the "ideal science" of the whole, although it can never attain the certainty of the positive sciences that deal with a special and limited subject-matter, has yet a legitimate place; and that its true method must henceforth be to do consciously what the systems of the past did "with a sort of unconscious dissimulation". The synthesis of organic bodies is a branch of chemical science that began practically with the researches of M. Berthelot himself. Accordingly the two articles on the character of chemistry as determined by its employment of methods that are at once synthetic and experimental are, from the philosophical point of view, the most interesting of all. The power of "creating its object," of realising experimentally its schemes of classification, including the members of them that are not already realised by nature, is found to be that which distinguishes chemistry from the natural history sciences. The experimental science of chemistry in this respect resembles mathematics. "These two orders of knowledge proceed equally by way of deduction in the search for the unknown. Only, the reasoning of the mathematician, founded on abstract data established by definition, leads to abstract conclusions equally rigorous; whilst the reasoning of the experimenter, founded on real and in consequence imperfectly known data, leads to conclusions of fact which are not certain, but only probable, and which can never dispense with an effective verification." (p. 65).

GIOVANNI CESCA, Professore di Filosofia nel Regio Liceo di Treviso. *La Morale della Filosofia scientifica.* Verona-Padova : Drucker e Tedeschi, 1886. Pp. 46.

In combating "the accusation brought against scientific philosophy of destroying morality," the author urges, among other arguments, that the doctrine of evolution as applied to society is not fatalistic, since a part of this doctrine is that the conscious aims of individuals count for more towards progress as the conception of progress becomes clearer; that the present decline in morality, of which he concedes to his opponents the existence, is due to the exaggerated development of modern industrialism, not to a decline of religious faith; and that "evolution" is not to be confounded with "Darwinism," on which—since the aims of the individual so far as they are taken account of by the doctrine of survival of the fittest are entirely egoistic—there can be no question of founding a system of morality. Conditions of a true morality are: (1) that it should have relation to men and their ends, (2) that its principle should be a material principle drawn from experience, not a purely formal and *a priori* principle, as with Kant, (3) that its foundation should be "anti-individual and anti-egoistic". The last condition has been recognised by those moralists, from Aristotle onwards, who have insisted on the natural sociability of man; but "the merit of having recognised this principle in all its extension and of having made it the basis of ethics belongs to the two true founders of moral science based on scientific philosophy—Ardigò and Stephen".

*Sulla Rappresentazione mentale dello Spazio in Rapporto col Sentimento dello Sforzo.* Note e Ricerche di Psicologia sperimentale del Prof. ENRICO MORSELLI, Direttore della Clinica delle Malattie mentali nell' Università di Torino. Milano-Torino : Fratelli Dumolard, 1886. Pp. 39.

The result of a series of experiments the author has made on his power of reproducing spatial images perceived under varied conditions, is confirmation of the doctrine of the *a posteriori* origin of the sense of space, and establishment of the preponderance, among its factors, of experiences of the muscular sense. He finds analogies throughout between his own results with regard to space and those of Buccola and others with regard to time. There is, for example, a tendency to augment small and to diminish large spaces ; there is a "point of indifference" ; and with larger spaces the errors become greater according to a formula identical with that which applies to intervals of time.

*La Religione come Scienza.* Saggio di ABELARDIUS. Cremona : Tipografia sociale, 1885. Pp. 111.

Since the phenomena of religion are of subjective order, religion is "a psychological science". By introspective analysis of the religious consciousness, therefore, the "scientific religion" may be arrived at, *viz.*, "Neo-Christianity".

*Vorlesungen über Metaphysik mit besonderer Beziehung auf Kant.* Von Dr. JULIUS BERGMANN, ord. Prof. der Philosophie an der Universität zu Marburg. Berlin : Mittler, 1886. Pp. viii, 490.

The author (whose *Reine Logik* i. was critically noticed in MIND, Vol. v. 139) defines metaphysics, after Aristotle, as "the science of being as being". Everything that is represented is represented not only as existing, but also as a thing ; hence metaphysics deals not only with being as being, but also with things as things. It is not more than other sciences in need of a preliminary criticism that shall inquire into the limits of reason ; and the merit of Kant is really that of having made a reform in metaphysics, not that of introducing the new idea of a "criticism of knowledge". Metaphysics is the science (not "criticism") of reason, as well as the science of things ; the science of knowing as well as the science of being. For "being" is a content of intuition, a determination of things that is present in all perception. When we think of an object as existing—and we do this even when we know that actually it does not exist—we think at the same time a thought, or more accurately a perception, of which it is the object. This thought is identical with the being of the thing. "Perceptibility" and being perceived (by a consciousness) are the same. When we try to think of things as independently existing, inconsistencies reveal themselves : so that ultimately we arrive at the proposition, "Being is consciousness perceiving itself". "The general notion of thinking or consciousness is therefore identical with the general notion of being." The notion of being, it is found, requires a plurality of beings (*i.e.*, of *Egos*), and further a conception of these as part of an intelligible whole. Thus from the science of mere being, metaphysics passes into general philosophy. Philosophy, while remaining always knowledge of things from concepts,—but not (as Kant incorrectly asserted of all metaphysical systems previous to the *Kritik*) in independence of intuition and perception,—passes from the general to the particular, or from the lower to the higher, arriving at length at the "concrete whole" that includes all existing things in its self-conscious unity. Carried out in detail, it does not remain merely theoretical, but considers man not only as knowing, but also as feeling and desiring. The direction of metaphysics was for a long time cosmological, starting from the being of things rather than from the being of the *Ego*. Kant made it psychological, but without changing its essential character as dealing with being ; for in the psychological mode of consideration the *Ego* is viewed as existent, and may be made the starting-point of a complete ontological doctrine. In the

present series of "lectures" the author does not attempt to set forth in its entirety his metaphysical—still less his philosophical—doctrine, but only gives the preliminaries ; his chief object being to clear the ground by showing that metaphysics (in the older sense) may go forward as securely as any of the special sciences, since it needs only the same kind of constant revision of methods, naturally determined by their actual application to the appropriate subject-matter, and not a complete criticism of them before any application at all is attempted. Such a criticism, for the rest, is impracticable and even self-contradictory. The subjects of the lectures are : (1) The Problem of Metaphysic ; (2) Metaphysic, *Vernunftkritik*, Science of Reason ; (3) Being and External Feeling ; (4) Being and External Intuition ; (5, 6) External Perception as Feeling, Intuition and Thought ; (7, 8) Being and External Perception ; (9-11) Internal and External Perception ; (12, 13) Being and Internal Perception ; (14) Things-in-themselves ; (15, 16) The Notion of Being ; (17, 18) Formal Determinations of the Notion of Being ; (19) The Intuitive Content of the Notion of Being ; (20) Metaphysic and Philosophy.

*Ueber Materie und Geist (Zur Verständigung) nebst einem Anhang über den Darwinismus.* Von Dr. ADOLPH STEUDEL. Stuttgart : A. Bonz, 1885. Pp. 58.

This book consists chiefly of citations of the opinions of various modern German writers on the nature of mind and matter. The author's principal object is to refute materialism. His "Appendix on Darwinism" is directed against Haeckel. In Dr. Steudel's opinion, the theories of natural selection and sexual selection are equally groundless, and have "raised so much dust," simply because of the attraction anything materialistic has for "the unthinking many" ; "in a short time" they will be heard of no more.

*Epikur. Seine Persönlichkeit und seine Lehre. Eine Monographie in populärer Fassung von JOSEF KREIBIG.* Wien : Hahn & Goldmann, 1886. Pp. 50.

A sympathetic sketch of the personality of Epicurus and his philosophy. The introductory section (pp. 7-21) gives an account of the fortunes of Epicureanism in ancient and modern times and the estimation in which it has been held. The system of Epicurus is then described under the heads of Logic, Physics and Ethics. At the end there is a defence of the Epicurean doctrine of happiness as distinguished from that of Aristippus.

*Geschichte der neueren Philosophie von Nikolaus von Kues bis zur Gegenwart.* Im Grundriss dargestellt von Dr. RICHARD FALCKENBERG, Privatdozent an der Universität Jena. Leipzig : Veit, 1886. Pp. viii., 493.

This history of modern philosophy aims at holding a mean position between Windelband's *Geschichte* and Ueberweg's *Grundriss* ; that is to say, it is to keep close to the words of the philosophers expounded and to be less literary than the former, while it is less bibliographical than the latter. The author seems to have succeeded very well in combining the merits of both modes of treatment. His exposition of philosophic systems is readable as well as careful ; and his bibliography is very full and exact. Ch. i. (pp. 14-56) is an account of the period of transition from mediæval to modern philosophy. This is taken as extending from the middle of the 15th to the middle of the 17th century ; Nicholas of Cusa opening the transition-period, Descartes the properly modern period. The remainder of the book is divided into two parts, the first of which (cc. ii.-viii., pp. 57-242) deals with the period from Descartes to Kant, the second

(cc. ix.-xvi., pp. 242-471) with the period from Kant to the present time. Then follow Indices of philosophical terms used (pp. 472-86), of philosophers treated (487-91), and of historians, critics, &c., cited (pp. 491-3). The author accepts, as an important point of view definitively gained for the study of history of philosophy, the Hegelian doctrine of a progressive bringing to light of different sides and aspects of truth; but he insists also on the necessity of recognising personality, individual circumstances, national genius, &c., as factors in the formation of systems. The two dangers to avoid in writing the history of philosophy are "lawless individualism" and "abstract logical schematism". Of these the second is the greater: and accordingly he tries to exclude as much as possible from his exposition the influence of his own conclusions as to the true direction of thought; merely indicating them in the Introduction and at the end. Modern philosophy has hitherto been predominantly "intellectual," as ancient philosophy was "aesthetic" and mediæval philosophy "religious". This character is associated with its character as "anti-scholastic". To the specifically modern tendency of thought Kant stands opposed and superior, as Plato did to the specifically Greek tendency. Kant has assigned its limitations to the naturalistic and mechanical explanation of things and has opposed "moralism" to "intellectualism," by showing that "nature must be conceived from the point of view of spirit (as its product, for all law has its origin from spirit) and spirit from the point of view of will". Fichte's "Ethelismus" and Hegel's "Historismus" have their roots in the Kantian doctrine of the practical reason. The problem of the future seems to the author to be the renovation of the Idealism of Fichte and Hegel by a method that shall keep closer than theirs did to experience, that shall know how to estimate in all their bearings the results of the sciences of nature and man, and that shall proceed by severe and cautious demonstration (p. 471).

*Die Philosophie des Thomas von Aquino und die Kultur der Neuzeit.* Von DR. RUDOLF EUCKEN, Professor in Jena. Halle a. S.: C. E. M. Pfeffer (R. Stricker), 1886. Pp. 54.

In view of the modern Neo-Scholastic movement, the author has set himself to show what was the historical position of Thomas Aquinas and the actual result of his philosophical activity. He contends that only from the unhistorical point of view of the Middle Age could it seem possible to reconcile Christianity with the philosophy of Aristotle, the most remote of all ancient philosophies from Christian modes of thought, as was judged more correctly by an earlier Christian age. Although philosophy is subordinated to revelation in a way that is impossible for modern thinkers, who, even when they submit to authority, feel the necessity, as mediæval thinkers did not, of first justifying it; yet in the Thomistic system the ancient thinker often conquers the Christian. More is conceded to rationalism than agrees with the spirit of Christianity. And in content as well as in method, elements of thought that are foreign to Christianity gain admittance. There is, for example, in the system of Thomas as in that of Aristotle, "the hegemony of the intellect,"—the placing of the contemplative above the active virtues, of the theoretical above the practical reason. Thomas himself was not, as a thinker, distinctively Christian; being of the type of Aristotle and Leibniz rather than of Plato and Kant. On the points where Aristotle and Mediæval Christianity are in absolute agreement, they are in opposition to the modern spirit, and, in face of the changed condition of things by which changes of thought have been caused, it is hopeless to seek in the Thomistic system solutions of philosophical and social problems of which it was constructed in complete unconsciousness.

Even those who return to Thomism find it impossible to be "Thomist in the sense of Thomas". We may return to the past, but we do not find it again as it actually was. In conclusion the author expresses his high admiration for the great mediæval thinker and his work, points out the importance for criticism of "a system in which Aristotle, Plotinus and Augustin meet," and concedes the right to take a polemical stand on Thomism in order to draw attention to the defects of modern life; but finally again insists that it is as impossible really to return to the thoughts of the Middle Age as it is to restore the past otherwise than in memory.

*Die Seele indischer und hellenischer Philosophie in den Gespenstern moderner Geisterscherei.* Von ADOLF BASTIAN. Berlin : Weidmann, 1886. Pp. xlviii, 223.

The author's present contribution (coming after so many others) to the science of *Völkerpsychologie* deals with the idea of the soul, not only as it has existed in Hindu and Greek philosophy, but also as it exists in modern times among the higher as well as the lower races of mankind. In tracing the history of the related conceptions, he takes occasion to show, with the aid of his enormous reading, how all the features of "the new witches' kitchen" of Spiritualism, Theosophy and Esoteric Buddhism have been long since anticipated in the magical doctrines and practices of savages and in the survivals resembling them in historical religions and philosophies.

*Raumanschauung u. Formale Logik.* Von ALFRED Freiherrn v. BERGER, Jur. et Phil. Doctor. Wien : C. Konegen, 1886. Pp. 48.

This is a hostile criticism of the thesis maintained in F. A. Lange's posthumous *Logische Studien* (see MIND, Vol. ii. 278 and, more at length, iii. 112)—that "the intuition of spatial figures exhibiting concepts and their logical relations is the source of our conviction of the necessity and universality of the rules of formal logic". Against this position, which implies in Lange's view that they must have the character of synthetic judgments *a priori*, the author would uphold Kant's doctrine that they are strictly analytic, in dependence on the law of contradiction.

*Ueber Wesen und Wirkung der Tragödie.* Eine Untersuchung von Prof. Lic. ADOLF WETZ. Berlin : C. Duncker's Verlag (C. Heymons), 1886. Pp. 79.

The author defines tragedy as "the poetic representation of the dæmonic". By "the dæmonic" he understands those events in human life which are apt to be ascribed to a hostile power in nature. All events are determined ultimately by a balance of forces : "the order of the world is mechanical, not moral". Any fault of miscalculation (which may also be, but is not necessarily, an ethical fault) may therefore bring upon its perpetrator an altogether disproportionate evil. It is this disproportion (from the ethical point of view) of an action and its consequences, that constitutes "the dæmonic". The embodiment of universal humanity and its fate in the individual character and fate of the hero gives rise to the "dramatic illusion," by which the spectator sees himself in the hero—or rather in each person of the drama in turn—and sees, concentrated in the sufferings that are represented on the stage, all the possible attacks, from which in the conflicts of life he is never secure, of the dæmonic powers of nature. Having, by this identification with the hero, as it were, lived through all that is represented before him, and suffered in the person of another the worst that fate can inflict, he now feels himself set free for ever (although in reality the feeling of liberation can only be temporary) from dependence on external forces, exempt from all the strokes of fate.

This is the Aristotelian *κάθαρσις*, as dread of the possible "daemonic" events of life and identification with the hero are, respectively, the Aristotelian "terror" and "pity"; there being, in the author's view, this difference, that the *κάθαρσις*, according to Aristotle, is only the getting rid of an oppression, and therefore negative, while the sense of freedom, as he understands it, is a positive heightening of the feeling the mind has of its own power. He goes on to argue, in the concluding part of his essay, that this sense of freedom from subjection to the external order is the end of all religion and philosophy, as well as of all art; drawing finally a comparison between the psychological effect of tragedy and the effect that is contemplated as the end of "the Pauline faith". In both cases there is "liberation through internal experience by means of participation in the external experience of another".

*Die Italienische Philosophie des neunzehnten Jahrhunderts.* Von Dr. KARL WERNER. Vierter Band : "Die Italienische Philosophie der Gegenwart". Wien : G. P. Fasny, 1886. Pp. ix., 281.

The present volume of Dr. Werner's extensive work (see MIND 41, p. 132, for the foregoing one) is devoted to contemporary Italian philosophy. It deals in order with "Naturalistic Positivism and Evolutionism" (pp. 1-59), with Kant-studies (pp. 60-84) and Vico-studies (pp. 87-118), with the "Eclectic Idealism" of Tagliaverri, Labanca and Allievo (pp. 119-175), and with the modern representatives of the schools of Rosmini and Gioberti (pp. 179-277). The account that is here given of the philosophical movement in modern Italy is not only minute and accurate, but impartial and, from the author's point of view, appreciative. He regards Vico as the representative of the national genius of Italy. With Vico, accordingly, any future attempt to renovate Italian philosophy must put itself in relation. The aim of philosophy is to express the common thought of humanity. This the pre-Christian merely national philosophy of Greece did imperfectly. In the Christian period the common thought of humanity found its normal expression in the Christian view of life and the world; and this common thought the different Christian nations have had to make specific. Thus there are two kinds of comprehensive philosophical activity—the expression of that which is generic in Christian thought, and the expression of this thought as it takes a specific national form. A classical representative of the first kind of activity is Thomas Aquinas; of the latter Vico is a pre-eminent example, his philosophy in its original features being "the incarnation of the Italian national spirit". The Italian philosophy of the future, in attaching itself to Vico, will have for one of its tasks to conciliate the national idea with the idea of the Church. Modern Christian philosophy generally is related to non-Christian naturalistic philosophy as Scholasticism to the Arabian philosophy of the Middle Age. Its task is to appropriate it; but there is a difference between the two periods that determines a certain difference in the relations of theology and philosophy. The thought of an immediate ordering of philosophy within theology must be given up. "Only a philosophy standing on its own basis is capable of bearing witness to Christian truth." Such a philosophy must be primarily a comprehension of man by himself. This is attained especially by the study of history of philosophy, which thus becomes the best foundation for a philosophical theology. It is in proceeding from the self-comprehension of humanity as attained by the historical method, not in proceeding directly from an ontological doctrine, that Christian philosophy in Italy must meet the positivist and naturalistic direction of thought, itself a re-action against a one-sided Platonism, and appropriate its results, while keeping in relation, on the other

hand, with the Thomistic philosophy of the Church. This idea of a conciliation of Thomism and science (understood in the widest sense) was the leading thought of the opening passage of Dr. Werner's first volume ; and with it he now concludes the last volume of the general part of his history.

*Hypatia von Alexandria.* Ein Beitrag zur Geschichte des Neuplatonismus. Von WOLFGANG ALEXANDER MEYER. Heidelberg : G. Weiss, 1886. Pp. 52.

The thoroughness of this study may be seen from the list of books consulted (pp. 51-2). The first section (pp. 6-33) gives all the facts that can be ascertained with regard to Hypatia. In the remaining sections an attempt is made, from the very slight materials available, to determine her probable philosophic position. The author arrives at the conclusion, chiefly from what is known of Hypatia's studies in mathematical and physical science, but also from some other indications, that "she had nothing in common with the Romantic reveries" of Iamblichus and his school, but was probably nearer in spirit to the classical sources of Greek philosophy than any of the Neo-Platonists except Hierocles, rejecting even the comparatively small element of theurgy and mysticism that is to be met with in Plotinus and Porphyry.

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RECEIVED also :

W. Graham, *The Social Problem, in its Economical, Moral and Political Aspects*, London, Kegan Paul & Trench, pp. xx., 480.  
 G. S. Morris, *University Education* (University of Michigan Philosophical Papers, I.), Ann Arbor, Andrews & Witherby, pp. 40.  
 W. D. Granger, *How to care for the Insane*, New York, Putnam, pp. x., 96.  
 M. A. Vaccaro, *La Lotta per l'Esistenza e i suoi Effetti nell' Umanità*, Roma, F. Setth, pp. 149.  
 A. v. Eye, *Wesen und Werth des Daseins*, 2te Aufl., Berlin, Allgemeine Verlags-Agentur, pp. vi., 310.  
 N. Grabowsky, *Die Bestimmung der Menschen*, Berlin, Duncker, pp. 112.  
 R. Schellwien, *Optische Häresien*, Halle a. S., C. E. M. Pfeffer (R. Stricker), pp. iv., 98.  
 R. Wallaschek, *Ideen zur praktischen Philosophie*, Tübingen, Laupp, pp. iv., 150.  
 B. Zimmels, *Leo Hebraeus, ein jüdischer Philosoph der Renaissance*, Breslau, Kœbner, pp. 120.  
 G. Mayer, *Heraklit von Ephesus und Arthur Schopenhauer*, Heidelberg, C. Winter, pp. 47.  
*Religionsphilosophie auf modern-wissenschaftlicher Grundlage*, mit einem Vorwort von J. Baumann, Leipzig, Veit, pp. vi., 230.  
 K. C. F. Krause, *Abriss des Systemes der Philosophie*, Leipzig, Schulze, pp. vi., 210.  
 G. Class, *Ideale u. Güter*, Erlangen, Deichert, pp. 188.  
 H. Druskowitz, *Moderne Versuche eines Religionsersatzes*, Heidelberg, Weiss, p. 90.  
 Fr. Kirchner, *Wörterbuch der philosophischen Grundbegriffe*, Heidelberg, Weiss, pp. 459.  
*Aristotelis περὶ ἐργασίας interp. est* Fr. Michelis, Heidelberg, Weiss, pp. 84.  
 A. Thilo u. O. Flügel, *Dittes über die praktische u. theoretische Philosophie* Herbarts, Langensalza, Beyer, pp. 67.

NOTICE of most of these will follow.

## VIII.—NOTES AND CORRESPONDENCE.

### RECENT REVOLUTIONS IN JESUIT PHILOSOPHY.

[The following communication is from the hand of one who is believed to be in a position to speak as he does concerning the events in question. Names of persons and places are withheld, but can be supplied.—EDITOR.]

It is by no means uninteresting to study, with the eye of an impartial outsider, the vicissitudes undergone by the philosophical doctrines of the Jesuits during the present century, that is, since the bull *'Solicitudo omnium Ecclesiarum'* undid, in 1814, what the bull *'Dominus ac Redemptor Noster'* had done forty years before. Two important questions have caused, during this period, many internal dissensions among them: one, concerning the origin of ideas; and the other relative to the ultimate constituents of matter. Both have been finally more or less decided; not indeed in themselves, but only as to the doctrine that professors belonging to the Society are exclusively bound to maintain. I propose to set down a few details about the circumstances under which these decisions took place, in so far as they are known to me either personally or by information received from members of the Society.

As in the Roman Catholic Church there are certain religious dogmas that every member of that Church is bound to believe, so among the Jesuits there are certain philosophical doctrines that every professor is bound to teach. This of course supposes a considerable difference between these two obligations, both in themselves and relatively to those who are bound by them. Still, when we reflect upon the spirit of obedience and discipline so carefully fostered amongst the Jesuits, we must not wonder if we find that an order for professors to teach such and such doctrines obtains in a few years the result intended, *viz.*, that the great majority of Jesuit students unhesitatingly reject the contrary opinions as not worth a moment's consideration, unless for the purpose of refuting them. And indeed, besides the higher motive of obedience which is the very life of the Order, and which, as St. Ignatius says in his famous *Letter on Obedience*, ought as far as possible to direct the mind as well as the will, there is also a lower motive, more closely resembling ambition. I do not speak of that *esprit de corps* that inclines most people to 'home' opinions—which makes Englishmen empirical psychologists and Frenchmen Cartesians; though this has certainly its effect upon most minds. But every clever student of philosophy among the Jesuits knows that, should he be one day chosen as professor, he will have to teach in such and such a manner, determined beforehand. True, he may teach it as he chooses: he may affirm the absurdity of the contrary opinion, or state that it is not in accordance with facts or dogmas, or set it down as improbable, or merely as less probable; he is even free to attribute probability to the position he maintains, without saying anything at all about the other. Moderation, however, is a rare phenomenon, and though the 'absurdissimae inopiae,' the 'evidentissimè evidens,' the 'deliramenta,' the recommendations to take a dose of hellebore, &c., so frequently found in Father Liberatore's (and others') text-books, are very generally laughed at by both students and professors, it would not be hard to name a professor who at a certain college in France (in 1877-1878) got in hot water for being too outspoken in favour of Descartes. It is true that this was not the only cause of his unpopularity amongst the students.

On the other hand, there are three different opinions circulating amongst the Jesuits as to how far such 'orders in council' have to do with the consciences of students or professors. One, which I believe is pretty generally reprobated, asserts that it is quite sufficient for the student to learn, and for the professor to teach, what is laid down, but that each man is perfectly free to enjoy his own opinions. The second, less reserved but more consistent with the spirit of the Order, does not oblige students and professors to *believe* the propositions in question, but only sincerely to seek truth in that direction, because it is more probable to find truth in the field where they are directed to look for it. The third opinion, seldom maintained to the north of the Alps and the Pyrenees, though held some years ago, to my knowledge, by the ghostly father of more than 120 students of philosophy and theology in one French college, obliges every member of the Society to believe, or at least to do his utmost to believe, that the propositions laid down for his acceptance are true. 'If these propositions are not evidently absurd, you can as easily believe them as you can a dogma of the Church; and if they are evidently absurd, you had better leave a Society that orders you to learn or teach absurdities.' This seems to me bringing faith into the philosophical field with a vengeance.

In a word, the very best and most practical means that can be taken to stamp out an obnoxious opinion from an intelligent and highly cultivated community of men are employed when thought necessary by the superiors: therein lies both the strength and the weakness of the Jesuits in the way of philosophical doctrine. Every man not only says the same (which is much), but is convinced of the same (which is more). It follows that they have great influence over those who are of their own religion, who do *not* know, and who must look up to some one for explanations. These are aware that what one Jesuit says, more than five thousand others<sup>1</sup> will be ready to say and defend throughout the whole world. To get an opinion from a Jesuit is to get the well-deliberated, matured and settled opinion of the whole Order. On the other hand, this very unanimity is with others a reason for taking no account of their opinions. Philosophers who like to think for themselves are apt to look with contempt on this kind of intellectual drill. Perhaps with too much contempt; for the Jesuits are after all very practical men, and if the esteem of the different schools of modern Philosophy that would be assured to the Society if every Jesuit was allowed to teach a different theory was really *worth* more than the strength of unity resulting from the opposite process, the heads of the Order would very probably take immediate steps to gain that esteem. Besides, this contempt seems inconsistent at least in such as belong to that very numerous school that thinks "it is as much beside the mark to wrangle over the truth of a philosophy as over the truth of *Paradise Lost*". (J. A. Stewart, MIND, Vol. iii. 240.) If the speculative truth of Philosophy is nothing, why despise the Jesuits' proceedings, that are practically speaking, so advantageous? What is the good of freedom when it is no matter (speculatively) what we think? And still more may be said: the doctrine held by a Jesuit, though not of account otherwise than as he is able, personally, to give it a superior expression, is important as the result of a vast amount of reflection, deliberation and patient thought. When, for instance, the Jesuits chose as their own doctrine the indeterminism of Molina, it was by no means a simple rivalry with the Dominicans that decided them. Molina's work on *The Reconciliation of Grace and Free Will* was printed in

<sup>1</sup> Amongst the 9000 Jesuits now in existence, I make a large deduction when I suppose 4000 (lay brothers, novices, humanists and regents) to be unacquainted with Philosophy.

1588 ; the Congregation ‘*De Auxiliis*’ was held in 1597. Year after year, month after month, the best and ablest heads amongst the Jesuits had sifted and re-sifted the question until it was completely exhausted: then, and only then, did the heads of the Order come to a determination. But the history of the Order in this century presents two cases of extraneous interference, which however justifiable they must appear to any Roman Catholic, will—to those who only seek in the doctrines of the Society an independent conclusion reached by the united labours of many learned men—be necessarily excepted from the last-mentioned justificative plea.

During the first half of this century, Ontologism was a highly popular system amongst many Jesuit fathers, especially in France. By ‘Ontologism’ was meant a peculiar system, to a certain degree similar to, if not identical with, Malebranche’s Idealism, that placed the origin of ideas in the intuition of Divine Being. There were different shades of opinion and different modes of explaining this intuition. If we *see* anything to be necessarily, eternally and absolutely true, we have the intuition of its necessary, eternal and absolute truth. Now, if so, we have an intuition of God; for God *is* necessary, eternal and absolute Truth. The difficulty, how such an intuition differs from the ‘vision of glory’ enjoyed by the saints in heaven, they got over by a distinction between *extuitive* and *intuitive* intuition, which is perhaps worth as much as many other distinctions.

But a great conflict soon sprang up in the Society between those who held these new opinions and those who stood by the ancient doctrine ‘*Nihil est in intellectu, quod non prius fuerit in sensu.*’ Aristotle’s position, that all knowledge takes its origin from sensation, had been that of the Society before its dissolution, and the late Father ——, in particular, fought hard for the old doctrines. His endeavours were crowned with success. The Father General applied to Rome in order to know what was officially thought of Ontologism. The reply of the Congregation that he consulted was, ‘*Non tuò doceri potest*’. He thereupon immediately excluded Ontologism from being taught as a probable doctrine in any of the Society’s colleges. The submission of the professors appeared complete; one of them even went so far as to argue very forcibly the next day against the very system he had so long upheld as the only true one; at least, I heard this as a tradition, handed down from generation to generation of students. All would not do, however. The system had got intertwined with the very fibres of their thoughts; they explained everything by it, and could explain nothing without it. So they were rapidly superseded; a new generation of professors sprang up in a few years, while the others either retired to confess ladies in quiet Residences or departed to convert savages in Eastern or Western Missions. A few only remained at the time when I had the advantage of being acquainted with the Jesuits—old men of whom the students said to each other, ‘Father So-and-so was a famous Ontologist in the days of Ontologism’.

A yet more serious subject of internal dissensions remained. The ancient and time-honoured system of Matter and Form was flatly denied by the new Atomists. Father —— this time was among the latter, because he said they had physical and chemical science on their side, and that Aristotle himself, had he lived in our days, would have been an Atomist. On the other hand, his adversaries contended that the question was meta-, that is, supra-physical, and one in which no discoveries, were they ever so important, could make the least change. The disputes waxed fiercer and hotter every day. Each occasion of ‘*Menstruales Disputationes*’ was seized to bring forward the question. It was said that scandals had taken place in the Roman College itself; that grave fathers had, in the heat of discus-

sion and of warm Italian blood, openly loaded each other with epithets hardly consistent with charity. To put a stop to this, Father Beckx wrote a 'general epistle,' in which, while distinctly permitting every professor to choose the opinion he preferred and to defend it in class, he prohibited all mention of the question in any public dispute. Different schools of thought were immediately formed among the pupils, since perfect liberty was given ; and philosophical disintegration, hindered on other points by the strong hand of authority, soon divided every Jesuit 'scholasticate' into camps as hostile concerning this matter as their outside contemporaries—Kantians, Hegelians, or Positivists—are to each other. Some students were pure Thomists—called 'exaggerated' by the other shades of opinion—who affirmed that matter was by itself only an '*ens viale*' (*a being on the way to be*) possessing no existence but that given by the form ; having only a real *essence*, and that an incomplete one. Others, moderate Thomists, held with Suarez that matter having an incomplete essence has an incomplete existence too : for real existence and real essence are not two different things, but one and the same. Some, trying with the subtle Father Lanzilli<sup>1</sup> and others, to effect a compromise, admitted the existence of ultimate atoms, which atoms were made up of matter and form. All these schools, it must be remarked, maintained (the great point in dispute) a *real*, not a *fiction*, difference between matter and form—so that they were not only two different aspects of the same reality, but two different realities that completed, by pervading each other : matter, by its power of receiving form ; form, by the act that was received in matter. Others, on the contrary, interpreted the words 'matter' and 'form' as a mere double aspect of the same thing ; and whatever arguments were urged in favour of a distinction between the two only amounted, in their opinion, to the proof of a logical distinction. First stood the followers of Tongiorgi, in whose valuable text-book, long a rival of Liberatore's, atoms were admitted as extended in space, but physically indivisible, though composed of parts ; then the partisans of Boscovitch, whose 'puncta simplicia' or atomic centres of force were, however, held by only a few scientific fathers, bravely asserting 'Actio in distans' though they confessed they did not understand how it was possible ; lastly, those who adopted Father Palmieri's bold hypothesis of atoms not really but *virtually* extended—atoms without real parts yet filling up real space—which cut short a great many difficulties, but created many more. The vortex-theory of Sir William Thomson was not discussed, nor, so far as I am aware, even known to exist by the generality of students.

The Thomist fathers, invoking the ancient rules of the Society, had, it is said, often applied to Pope Pius IX. to coerce their brethren into a way of thinking more conformable with the philosophy of St. Thomas ; but Pius IX., except in so far as vague and general exhortations went, would do nothing to interfere with the ordinary course of things. When Leo XIII. succeeded him, a vague dread of interference fell upon all those of the Society who were Atomists, and a vague hope filled the breasts of their adversaries for the same reason. It was well known that Cardinal Pecci, the present Pope's nephew, had been a member of the Society and a zealous Thomist ; indeed I heard from the lips of Father —— himself that he had left the Society because its teachings were not sufficiently conformable to those of the Angelic Doctor. Vague rumours were soon

<sup>1</sup> Father Lanzilli's works were considered too full of philosophical novelties to be printed : I only saw them lithographed *ad usum scholarum*. They affect the number three : every chapter, three articles ; every article, three propositions.

spread that Leo XIII. was going to condemn Atomism, or to do something in that way ; but these rumours were repeatedly denied from head-quarters.

In the beginning of autumn 1878, the students of the French college, to which I have before referred—I only give details of what I personally know—were in an unusually excited state. It was known that the Rector had received letters from Rome, and it was confidently believed, both by Thomists and ultra-Thomists, that these letters had to do with the doctrine of Matter and Form. They were, however, only a personal reply from the Father General to the effect that Leo XIII. had, in recommending the study of St. Thomas to the Society of Jesus, avoided any particular commentary or hint as to a change of doctrine in any direction whatever ; that consequently the situation was exactly the same as at the time of his former letters, of which he mentioned the date and contents. I feel convinced that the Society had no intention to choose, of its own accord, any decided position as regards this most difficult problem ; but if it be true, as I heard it confidently asserted, that the question whether Atomism (1) ought not to be made a doctrine of the Society was mooted in the councils of the Order, and almost resolved in the affirmative,<sup>1</sup> the sequel shows that they acted very wisely in not adopting that system. For about two or three days after the letter I mentioned had been received, a bell called the scholars one afternoon, at an unusual hour, into the lecture-room. The professors were present. The Rector read another letter from Father Beckx : it stated simply that he had been desired to render the teaching of the Society more in harmony with that of St. Thomas ; and that, having inquired of the person who brought that communication from the Pope in what direction that modification was to be made, he had been answered, ‘In the question of the ultimate constitution of matter’. Thereupon, following the direction of Pope Leo XIII., he gave orders that in future the real distinction of matter and form should be taught in all colleges of the Society, and concluded with a short exhortation to the partisans of the different schools, advising humility on the one hand and submission on the other. The letter was worded with extraordinary care, so as to show entire personal neutrality in the matter, and seemed rather to be the notification of Leo XIII.’s will than a decree for which Father Beckx was himself responsible.

The effect was, of course, instantaneous. All disputes from member to member were stopped at once. Many of the most determined partisans of Atomism now turned *à la minute* into Ultra-Thomists, thereby affording considerable amusement to the vanquished and as much annoyance to the victorious party, who very rightly considered their sudden conversion as too strange to be anything but a joke. Others took the matter more seriously, and refused to budge one inch from their old positions. What was true before F. Beckx’s letter was just as true afterwards ; the worst that

<sup>1</sup> Father Beckx was not a philosophical but a practical mind. He understood the necessity of unity in teaching, and, whilst he allowed full liberty of opinion to all, watched carefully which way the tide of public opinion was setting amongst the philosophers of the Society. When he saw that the majority was decidedly in favour of Atomism, he set to work prudently and slowly, eliminating those professors who were opposed to it; so much so, that all the teachers at the Roman college were at last Atomists. Hence the rivalry with the Dominicans who professed the opposite doctrines ; and hence it is certain that Leo XIII.’s ‘gentle hint’ was intended, by those who counselled it, to be a blow at the Society, which could not honourably refuse to take the hint, although it was so much opposed to the opinion of the best minds among them.

could happen to them was never to become professors, and they were quite resigned to that. Many took the advice of the ghostly father I have before referred to and did their best to believe that matter and form were really distinct.

It must be remembered, in order to understand this, that Jesuits profess absolute and perfect obedience to the Holy See in all that concerns the teaching or even the very existence of their Order. The Indeterminism of Molina, opposed to Thomist Determinism as understood by the Dominicans, is one of the doctrines for which the Jesuits have battled most stoutly, and yet it would suffice for Leo XIII. to say one word for them to take up the pen in favour of Determinism.

Two years after the events just recorded, my relations with the Society ceased altogether; I cannot, therefore, now say whether Atomism is dying out or no. In all probability it is. The 'scholasticates' are recruited by novices and humanists on the one hand, for whom the question is prejudged as settled by superior wisdom, or on the other by men who are already tired out with work and care little for metaphysical subtleties. On neither side is there likely to be any determined resistance to the all-pervading influence of Matter and Form. Probably in a few years the last representatives of the Atomistic school will have died out; for only professors are generally known to have held such opinions, and Jesuits, whether professors or others, rarely pass the age of sixty.

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PROF. LLOYD MORGAN ON THE STUDY OF ANIMAL INTELLIGENCE.

In common, no doubt, with all the other readers of *MIND*, I have been much interested in Prof. Lloyd Morgan's views on what I may term the antecedent impossibility of a Science of Comparative Psychology; but an attentive reading of his paper in *MIND* 42 fails to show me any material change in those views as previously published by him in *Nature*. May I refer any of the readers of *MIND* who care to follow the subject to the somewhat elaborate examination which I have already made of them in the pages of *Nature*? This will be found in one of the numbers for February, 1884.

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GEORGE J. ROMANES.

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THE ARISTOTELIAN SOCIETY FOR THE SYSTEMATIC STUDY OF PHILOSOPHY.—At the meeting of March 8, the discussion of T. H. Green's *Prolegomena to Ethics*, Book i., "The Metaphysics of Knowledge," was continued, being again introduced by the President's bringing forward some objections to the theory from *marginalia* of his own. On March 22, Mr A. F. Lake continued the examination of Kant's *Critick of Practical Reason*, going down to the end of the "Dialectic"; and this subject was concluded on April 19, by a discussion of the whole theory, introduced by a paper from Mr P. Daphne on the "Methodology". The meetings of April 5, and May 10 and 24, were occupied respectively by papers from Mr G. J. Romanes "On Mind-stuff in relation to Theism"; from Professor Bain "On the Association of Ideas"; and from the Rev. A. L. Moore, "On Design in Organic and Inorganic Nature"; which in every instance gave rise to interesting and animated discussions. The latter paper concluded the philosophical work of the Seventh Session of the Society.

Mr. James Seth has been appointed to the philosophical chair in Dalhousie College, Halifax, N.S., vacated by Prof. J. G. Schurman, now of Cornell University, N.Y.

THE JOURNAL OF SPECULATIVE PHILOSOPHY.—Vol. xix., No. 4. A. P. Peabody—Is Pantheism the legitimate outcome of Modern Science? E. Montgomery—Ditto. W. T. Harris—Ditto. G. H. Howison—Is Modern Science pantheistic? P. Spence—The Facts about External Perception. Notes and Discussions, &c.

REVUE PHILOSOPHIQUE.—An. xi., No. 4. F. Bonillier—Y a-t-il une philosophie de l'histoire? A. Penjon—La métaphysique de Lotze. Lesbazeilles—Les bases psychologiques de la religion (i.). Notes et Discussions (P. Tannery—A propos de la loi de Weber. V. Egger—La perception de l'étendue par l'œil. Douliot—Sur l'image rétinienne (avec fig.). Un Néo-scolastique—Critique de la théorie des figures et modes du syllogisme. Analyses et Comptes-rendus. Société de Psychologie physiologique (Ferrari, Héricourt et Ch. Richet—La personnalité et l'écriture: Essai de graphologie expérimentale (avec planches). P. Marie et Azoulay—Sur le temps de réaction personnelle pour les impressions auditives. E. Gley—A propos d'une observation du sommeil provoqué à distance. M. Etienne—Quelques expériences de somnambulisme. F. W. Myers—Des hallucinations véridiques). Revue des Périodiques. No. 5. J. Delboeuf—La mémoire chez les hypnotisés. Lesbazeilles—Les bases, &c. (fin). Rev. Générale (M. Vernes—Histoire et philosophie religieuses). Analyses, &c. Observations et Documents (Ch. Férey—A propos d'un *lapsus calami*). Correspondance (J. Delboeuf, Un Scolastique). Rev. des Period. No. 6. Ch. Richet—Les origines et les modalités de la mémoire: Essai de psychologie générale (avec figs.). Fonsegrive—La logique de Lotze. Rev. Gén. (F. Paulhan—Travaux récents sur la morale: J. Martineau, E. Caird, W. R. Sorley, &c.). Analyses, &c. (G. C. Robertson, *Hobbes*; P. K. Ray, *Deductive Logic*; J. Veitch, *Logic*; W. L. Davidson, *Logic of Definition*, &c.). Soc. de Psych. phys. (A. Herzen—Les trois phases successives du retour à la conscience après un syncope. Bonnassies—La suggestion dans le haschisch—De la possibilité de faire passer un sujet du sommeil ordinaire au sommeil magnétique. Cotard—De l'aboulie et de l'inhibition en pathologie mentale).

LA CRITIQUE PHILOSOPHIQUE (Nouv. Sér.).—An. ii., No. 3. J. É. Pécaut—Le droit de l'Etat en matière morale (i.). L. Dauriac—Différence de degré et différence de nature. C. Renouvier—E. Renan, *Le Prêtre de Némi*. H. Monin—La notion abstraite de force divine dans l'*Iliade* (suite). . . . M. Bertrand—Les principes de l'esthétique de Pascal. Notices bibliog. No. 4. C. Renouvier—Le christianisme et la doctrine de l'évolution. H. Monin—La notion abstraite, &c. (suite). . . . C. Renouvier—Examen des *Premiers Principes* de H. Spencer (suite). F. Pillon—E. Rehrich, *Théorie de l'Éducation d'après les principes de Herbart*. No. 5. J. É. Pécaut—Le droit de l'Etat, &c. (ii.). C. Renouvier—Examen des *Premiers Principes* (suite). H. Monin—La notion, &c. (fin). L. Dauriac—Determinisme et dogmatisme. F. Pillon—M. Berthelot, *Les Origines de l'Alchimie*. Notices bibliog.

RIVISTA ITALIANA DI FILOSOFIA.—Vol. i., Disp. 2. Il discorso di Domenico Berti sopra Giordano Bruno. R. Benzoni—La filosofia dell' Accademia Romana di S. Tommaso. P. D'Ercole—L'educazione del bambino secondo Pestalozzi, Fröbel e Spencer (ii.). O. Salvadori—Appunti di metodo sopra l'ultima opera del Siciliani. Bibliografie (Sh. Hodgson, *Philosophy and Experience*, &c.) &c. Disp. 3. P. L. Cecchi—La scuola positiva e la critica storica. E. Dal Pozzo di Mombello—Mecanismo o funzione della memoria organica. P. D'Ercole—L'educazione, &c. (iii.). L. Ferri—Il concorso al premio reale di filosofia dell' Accademia dei Lincei. Bibliografie, &c.

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